

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

Summary record of the twenty eighth (28th) meeting of Re-Constituted Expert Appraisal Committee (REAC) held during 18-20th January, 2021 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.

The twenty eighth 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 during 18-20th January, 2021 in the Ministry of Environment, Forest and Climate Change (MoEF&CC) through video conferencing in view of the ongoing Corona Virus Disease (Covid-19) issue. The list of EAC attendees is as follows.

| S.No. | Name | Position | 18/01/2021 | 19/01/2021 | 20/01/2021 |
|-------|---|------------------|------------|------------|------------|
| 1. | Dr. Chhavi Nath Pandey | Chairman | Present | Present | Present |
| 2. | Dr. Bipin Prakash Thapliyal, Director, CPPRI. | Member | Absent | Absent | Absent |
| 3. | Dr. Siddharth Singh, Scientist 'E' IMD. | Member | Present | Present | Present |
| 4. | Dr. Jagdish Kishwan | Member | Present | Present | Present |
| 5. | Dr. G.V. Subramanyam | Member | Present | Present | Present |
| 6. | Dr. Tejaswini Ananth Kumar | Member | Present | Present | Present |
| 7. | Shri. Ashok Upadhyaya | Member | Present | Present | Present |
| 8. | Shri. Rajendra Prasad Sharma | Member | Present | Present | Present |
| 9. | Dr. Sanjay Deshmukh | Member | Absent | Absent | Absent |
| 10. | Prof. S.K. Singh | Member | Present | Present | Present |
| 11. | Dr. R. Gopichandran | Member | Absent | Absent | Absent |
| 12. | Shri Jagannadha Rao Avasarala | Member | Present | Present | Present |
| 13. | Shri. J.S.Kamyotra | Member | Present | Present | Present |
| 14. | Shri. A.K. Agrawal | Member Secretary | Present | Present | Present |

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 27th meeting held during 30-31st December, 2021 were confirmed by the EAC as already uploaded on PARIVESH.

18th January, 2021

- 28.1 Expansion of Steel Manufacturing Unit for production (24000 TPA to 96,000 TPA of billets) by adding Induction Furnace, Rolling Mill and Continuous Casting Machine by **M/s. Saboo Tor Pvt Ltd.**, at Trilokpur road, Kala Amb, Tehsil- Nahan, **District: Sirmaur, State: Himachal Pradesh.** [Online Proposal No. IA/HP/IND/98317/2019; File No. J-11011/169/2019-IA.II(I)] **-Environment Clearance –regarding.**

28.1.1 **M/s Saboo ToR Private Limited** has made an online application vide proposal no. IA/HP/IND/184063/2019 dated 20/11/2020 along with final EIA/EMP report for obtaining Environment Clearance for the project cited above. Subsequently, the project proponent had re-submitted their project proposal on 12/12/2020 vide proposal no. IA/HP/IND/98317/2019. The proposed project activity is listed in Category “A”, Project or Activity 3(a) i.e. Metallurgical industries (ferrous & non-ferrous) and is appraised at center level due to its location within 5 km radius of Haryana - Himachal Pradesh border at distance of 2Km.

Details submitted by the project proponent

28.1.2 The detail of the ToR is furnished as below:

| Date of application | Consideration | Details | Date of accord |
|----------------------------|---|--------------------|-----------------------|
| 13/03/2019 | 6 th meeting held on 29-30 th April, 2019 | Terms of Reference | 20/05/2019 |

28.1.3 The project of M/s. Saboo Tor (P) Ltd located in Kala Amb, Trilokpur road, Tehsil- Nahan District- Sirmaur, Himachal Pradesh is going for an expansion of production of Steel Billets/Ingots from 24,000 TPA to 96,000 TPA and Round, wire rod, TMT/MS Bars, Angles, Flats & rounds etc. from 23,800 TPA to 93,000TPA.

28.1.4 The Status of compliance of earlier EC is not applicable as the existing project is not covered under the EIA Notification 2006 as the existing production capacity is less than 30,000 TPA.

28.1.5 The total land required for the project is 15005 m². No forestland is involved. The entire land has been acquired for the project. The Project site is located near Markanda River (1 Km S).

28.1.6 The topography of the area is flat and reported to lies between Latitude 30°30'17.49"N-30°3'23.34"N & Longitude 77°12'26.54"E - 77°12'32.69"E in Survey of India topo sheets No. H43L/2, H43L/3, H43L/6, H43L/7 at an elevation of 440 m AMSL. The ground water table reported to ranges between 2.98 - 43.98 m bgl.

28.1.7 National Park/WL etc are not located within the distance of 10 KM from the site. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. There is no corridor for Schedule-I fauna.

28.1.8 The targeted production capacity of the steel billets/ingots and TMT/MS bars, angles, flats & rounds etc. is 96,000 TPA and 93,000 TPA respectively. The raw material of the plant would be transported by roads. The raw material will be bought from local and international market.

28.1.9 The water requirement of the project is estimated at 28.1m³ /day. The daily requirement of water will be met through the Ground Water. Permission from HPGWA has been obtained vide Lr. No. IPH-SE-P&I-II-EE-GWA/2019-20: 490-93 dated 29-October-2020.

28.1.10 The power requirement of the project is estimated as 9740.76KW, which will be obtained from the HPSEB.

- 28.1.11 Baseline Environmental Studies were conducted during Pre-monsoon season i.e. from March to May, 2019. Ambient air quality monitoring has been carried out at 8 locations during March to May, 2019 and the data submitted indicated: PM₁₀ (60.2 µg/m³ to 88.6µg/m³), PM_{2.5} (20.4 to 50.8 µg/m³), SO₂ (5.1 to 12.8 µg/m³) and NO_x (16.5 to 30.5 µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 2.0 µg/m³ with respect to the PM₁₀.
- 28.1.12 Ground water quality has been monitored in 8 locations in the study area and analyzed. Ph:7.31 to 7.59, Total Hardness: 210 to 250 mg/l, Chlorides: 19.8 to 29.7 mg/l, Heavy metals are within the limits. Surface water samples were analyzed from one location. pH: 7.67 to 7.74.; DO: 6.9 to 7.0 mg/l and BOD: 14.0-15.5mg/l. COD from 28.2 to 29.5mg/l.
- 28.1.13 Noise levels are in the range of 50.5 dB (A) to 68.7 dB (A) dBA for daytime and 41.1 dB (A) to 56.4 dB (A) dBA for nighttime.
- 28.1.14 No/ R&R is involved. It has been envisaged that no families to be rehabilitated.
- 28.1.15 With the proposed implementation there will be 02 no. furnaces 1X6.5 TPH & 1X20 TPH. Hazardous/Solid Waste generated (0.035kl/annum) from DG sets in the form of used oil is being re-used as lubricants within the industry. About 14TPD of slag which is not a H.W will be generated and the same after recovery of iron will be supplied to M/s Maha Luxmi Bricks Co. under proper agreement.0.04 TPD of APCD Dust will be disposed of to TSDF facility (M/s Shivalik Solid Waste and Management Limited).
- 28.1.16 It has been reported that the Consent to Operate from the HP State Pollution Control Board / Pollution Control Committee obtained vide Lr. No. HPSPCB/PCB-ID14132-13804-6 dated 29- August-2018 and consent is valid from 31-March-2018 to 31-March-2021.
- 28.1.17 The Public hearing for the project was held on 27/12/2019 at Project Site under the chairmanship of Additional Deputy Commissioner cum Chairman for production of 96,000 TPA Steel Billets/Ingots and 93,000 TPA of and TMT/MS Bars, Angles, Flats & rounds. The major issues raised during public hearing are employment and pollution control.
- 28.1.18 The capital cost of the project is Rs. 39.12 Crores and the capital cost for environmental protection measures is proposed as Rs. 163.0 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs47.0Lakh. Rs. 24 Lacs has been earmarked for CER activities. The employment generation from the proposed project / expansion is 150. The details of cost of environmental protection measures are as follows:

| S.No | Title | Capital Cost Rs. Lakh | Recurring Cost Rs. Lakh |
|------|--|--------------------------|----------------------------|
| 1 | Pollution Control during construction stage | 5.0 | --- |
| 2. | Air Pollution Control (Installation of APCD) | 100 | 15.0 |
| 3. | Water Pollution Control Measures | 30.0 | 10.0 |

| S.No | Title | Capital Cost Rs. Lakh | Recurring Cost Rs. Lakh |
|------|---|--------------------------|----------------------------|
| 4. | Noise Pollution Control (Including cost of Landscaping, Green Belt) | 8.0 | 4.0 |
| 5. | Solid Waste Management | 5.0 | 2.0 |
| 6. | Environment Monitoring and Management | - | 10.0 |
| 7. | Occupational Health, Safety and Risk Management | 5.0 | 2.0 |
| 8. | RWH | 10.0 | 4.0 |
| | Total | 163.0 | 47.0 |

28.1.19 Greenbelt will be developed in 5260 m² which is about 35% of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 1400saplings will be planted and nurtured in 5260 m² in two years.

28.1.20 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

28.1.21 Name of the consultant: Chandigarh Pollution Testing Laboratory –EIA Division – S.No. 92, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021.

Observations of the Committee

28.1.22 The Committee noted the following:

- i. This proposal came up for appraisal in 25th EAC meeting during 25-27th November, 2020. .
- ii. PP is compliant with CTO and the current CTO is valid till 31st March 2021.
- iii. To the scale plant layout drawing has been furnished that shows 35 % green belt. Due to expansion the green belt is not uniform around the plant boundary.
- iv. Approach road to the plant from Trilokpur- Kala Amb road has been shown.
- v. Action plan to address the issues raised in PH has been furnished.
- vi. 28.1 KLD Water shall be drawn from Bore Well. RWH and GW recharge has been confirmed,
- vii. 100 % hot charging shall be done and existing RH Furnace shall be dismantled after expansion.

Recommendations of the Committee

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

A. Specific conditions

- i. PM from stacks shall be less than 30 mg/Nm³. More efficient bags such as PTFE dipped bags to be used.
- ii. 100% hot charging shall be done and existing RHF shall be dismantled after expansion as committed by PP.
- iii. Green belt shall be 35 % as volunteered by the project proponent.
- iv. Treated effluent from the plant shall be reused and recycled completely. STP shall be installed to treat domestic wastewater.
- v. CEMS shall be installed on all process stacks.
- vi. DG sets shall have acoustic enclosures.
- vii. EMP activity for social and infrastructure development shall include, water cooler installation and Plantation in schools, solar lighting and construction of toilets in schools. All these EMPs shall be completed in two years from the date of EC.
- viii. 80% employees to be recruited for expansion project shall be local.
- ix. RWH shall be carried out in the premises extensively.
- x. Plant roads shall be paved and an industrial vacuum cleaner shall be deployed to clean the roads regularly to keep fugitive emission under control.
- xi. Hazardous waste shall be disposed of in TSDF.

B. General conditions

I. Statutory compliance:

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

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- v. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
- vii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.

- viii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- ix. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. Adhere to 'Zero Liquid Discharge'.
- iv. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

- i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

VI. Waste management

- i. Used refractories shall be recycled as far as possible.
- ii. Kitchen waste shall be composted or converted to biogas for further use.
- iii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces
- iv. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.

VII. Green Belt

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

VIII. Public hearing and Human health issues

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

- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Corporate Environment Responsibility

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

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities,

commencing the land development work and start of production operation by the project.

- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

28.2 Increase in Production of Clinker from 3.50 to 6.50 MTPA, Cement from 3.07 to 7.60 MTPA & increase in power generation capacity from 50 to 75 MW **M/s Orient Cement Limited** at Devapur village, Kasipet Mandal, **Mancherial District, Telangana State** by [Online Proposal No IA/TG/IND/140701/2007; File No. J-11011/266/2007-IA II (I)]- **Environmental Clearance- reg.**

28.2.1 **M/s Orient Cement Limited** has made an online application vide proposal no. IA/TG/IND/140701/2007 28/12/2020 seeking environment clearance for the project cited above. The proposed project activity is listed at S. No. 3(b), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

Details submitted by the project proponent

28.2.2 M/s. Orient Cement Limited had obtained Terms of Reference from MoEFCC vide Lr.no. J-11011/266/2007-IA-II (I) dated 19/04/2018 for carrying out the Environmental Impact Assessment study.

28.2.3 M/s Orient Cement Limited (OCL) now proposes to increase production capacity of the cement plant by increasing Clinker production capacity from 3.50 to 6.50 MTPA by modifications in the process equipment of existing Unit I, II & III and installing a New unit i.e., Unit IV of 2.50 MTPA clinker capacity. Cement production capacity of the plant will be enhanced from 3.07 to 7.60 MTPA. And to increase power generation capacity from 50 to 75 MW by installing 25 MW (15 MW from existing Units I, II & III and 10 MW from Proposed Unit IV) Waste Heat Recovery Based Power Plant (WHRB PP).

28.2.4 The Status of compliance of earlier EC was obtained from Regional Office, Chennai vide Lr. No. E.P./12.1/595/AP/Dated 24/09/2018. There are no non-compliances reported by Regional

Officer. The proposed production capacity of various units of plant before and after expansion is given below.

| | Before Expansion | | | After expansion | | |
|-----------|------------------|--------|--|-----------------|--------|---|
| | Clinker | Cement | Power (MW) | Clinker | Cement | Power (MW) |
| | (MTPA) | | | (MTPA) | | |
| Unit –I | 1.19 | 3.07 | 50 (2 x 25 MW) (Coal based CPP) | 1.25 | 4.10 | 75 MW (addition of 25 MW WHRB CPP) (15 MW for Units I,II & II and 10 MW for Unit IV) |
| Unit –II | 0.92 | | | 1.10 | | |
| Unit –III | 1.39 | | | 1.65 | | |
| Unit –IV | - | - | | 2.50 | 3.50 | |
| Total | 3.50 | 3.07 | | 6.50 | 7.60 | |

28.2.5 The Cement plant is presently located in an area of 425.91 acres and after expansion the total area of the cement plant will be increased to 436.91 acres (An additional area of 11 Acres will be used for expansion). This additional land which is free from habitation/vegetation will be acquired by OCL. No River passes through the project area. It has been reported that no water body exists around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

28.2.6 The topography of the area is flat and lies between 19°1'18.34" N - 19° 2'14.75"N latitude and 79°20'27.11" E - 79°21'35.64" E longitude with an average altitude of 250 m above MSL. The area falls in Survey of India Toposheet no. 56/M/8.

28.2.7 There is no National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in 10 km radius of the study area. The area also does not report to form corridor for Schedule-I fauna. The plant area is devoid of forest land. The Nearest Reserved Forest is Rali RF is at 0.1 km in W direction. The list of Schedule I Species, according to Wildlife (Protection) Act, 1972, recorded from the buffer zone is given below:

| S.NO. | Common Name | Scientific name | IWPA, Schedule |
|-------|------------------------|---------------------------|----------------|
| 1 | Four-horned Antelope | Tetracerus quadricornis | Schedule I |
| 2 | Gaur | Bos gaurus | Schedule I |
| 3 | Indian Pangolin | Manis crassicaudata | Schedule I |
| 4 | Indian Gazelle | Gazella bennettii | Schedule I |
| 5 | Indian Ratel | Mellivora capensis indica | Schedule I |
| 6 | Indian Wolf | Canis lupus pallipes | Schedule I |
| 7 | Leopard | Panthera pardus | Schedule I |
| 8 | Sloth Bear | Melursus ursinus | Schedule I |
| 9 | Tiger | Panthera tigris | Schedule I |
| 10 | Black Kite | Milvus migrans | Schedule I |
| 11 | Black-shouldered Kite | Elanus caeruleus | Schedule I |
| 12 | Crested Goshawk | Accipiter trivirgatus | Schedule I |
| 13 | Indian Peafowl | Pavo cristatus | Schedule I |
| 14 | Oriental Honey-buzzard | Pernis ptilorhynchus | Schedule I |
| 15 | Shikra | Accipiter badius | Schedule I |

The Wildlife Conservation Plan has been approved by PCCF, Forest Department, Govt of Telangana vide letter Rc.No. 15341/2019/WL-1 dated 12.03.2020 with conservation budget of Rs. 330 Lakhs to be implemented in three years.

28.2.8 The targeted production capacity of the Cement Plant is 6.50 MTPA Clinker and 7.06 MTPA Cement. The Limestone requirement of existing clinker production is presently met from adjacent Devapur Limestone Mine-1 of Telangana State Mineral Development Corporation (TSMDC) spread over an extent of 210 Ha. The requirement of raw material and other details is given below:

| Raw Material | Quantity per annum (in MTPA) | | | Mode of Transport |
|-----------------|------------------------------------|--------------------------------|---------------------|-------------------|
| | Before Expansion | After Expansion | Sourced from | |
| Limestone | 5.32 | 9.06 | TSMDC Mines | Closed Conveyor |
| Coal/ Petcoke | 0.30 (IND) 0.18 USA | 0.55 - IND 0.30 USA (OR) | SCCL, USA, ESSAR | Road / Rail |
| Cement plant | 0.30 (IND) 0.126 (US)- Pet coke | 0.51 - IND 0.21 - Pet coke | | |
| Coal | 0.35 | 0.35 | | |
| Power plant | | | | |
| Laterite - 1 | 0.13 | 0.22 | Warangal Area | Road |
| Laterite - 2 | 0.05 | 0.088 | Warangal Area | Road |
| Al. Laterite | 0.13 | 0.22 | Rajahmundry | Rail |
| Gypsum | 0.093 | 0.23 | Gujarat / Imported | Road/Rail |
| Fly ash for PPC | 0.55 | 1.7 | Captive /STPP | Road |

28.2.9 Water requirement of the plant will decrease from 3500 m³/day to 3250 m³/day. The water requirement will be met from Mine Pit and bore wells. Ground water permission obtained from Government of Telangana State.

28.2.10 The peak power consumption in the OCL Cement plant complex including TSMDC mine is 45 MW. This requirement is met from 50 MW Coal based Captive Power Plant. Additional power required is about 40 MW and the same will be sourced from proposed 25 MW WHRB PP and grid.

28.2.11 Baseline Environmental Studies were conducted during Summer Season 2018 season i.e., from March'18, April'18 and May'18. Ambient air quality monitoring has been carried out at 10 locations during March, 2018 to May, 2018 and the data submitted indicated: PM₁₀ (50.6 – 66 µg/m³), PM_{2.5} (27.4 – 32.7 µg/m³), SO₂ (11.3 – 12.6 µg/m³) and NO_x (12.7 – 13.6 µg/m³). The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 19 µg/m³ with respect to the PM₁₀, 9.5 µg/m³ with respect to the PM_{2.5}, 3.10 µg/m³ with respect to SO₂ and 18.8 µg/m³ with respect to the NO_x.

- 28.2.12 Ground water quality has been monitored in 08 locations in the study area and analysed. pH: 6.89 to 7.31, Total Hardness: 268 to 593 mg/l, Chlorides: 25 to 228 mg/l, Fluoride: 0.48 to 1.30 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 06 locations. pH: 7.70 to 8.41; and BOD: 2.0 to 3.0 mg/l. COD from 9 to 11 mg/l.
- 28.2.13 Noise levels recorded were found to be in the range of 50.7 – 71.8 dB (A) during daytime and in the range of 41.5 – 66.2 dB (A) during night time.
- 28.2.14 11 acres additional area is required for the expansion, which is free from habitation. Hence the point of Rehabilitation and Resettlement does not arise. Thus, no adverse impact is anticipated.
- 28.2.15 The dust collected in the air pollution control equipment in the cement plant is recycled back to the process. Hence no solid waste which requires disposal is generated from the plant. Refractory bricks are one of the solid waste generated from the kiln section. Due to wear, OCL will replace the refractory bricks once in a year. These bricks due to high recycling value are being disposed to outside agencies. No further solid waste is generated from the plant. From existing Captive Power Plant (50 MW), Ash generation from the power plant is 0.15 MTPA is used for cement production in the cement plant. The fly ash from economizers, air pre-heaters is collected in dry form by means of pneumatic conveying system. Fly ash is stored in the dry ash silos within the power plant premises and transported to cement plant for use in the manufacture of cement. The Bottom ash generated 0.045 MTPA at captive power plant boiler is collected in hoppers and is used in raw meal. The ash generated from existing power plant is totally consumed in the cement plant. Additionally, OCL will procure ash from nearby power plants based on PPC production requirement. Solid waste generated from colony and industrial canteen is disposed after segregating the waste into bio-degradable and non-degradable. Bio-degradable waste is utilized in the Anaerobic digester for biogas generation which is used in the canteen and non-degradable waste is disposed to local municipality. The sludge collected over the Sludge Drying Beds in Sewage Treatment Plant is used as manure in the Plantation work. OCL is storing the hazardous waste in a designated area. This area is isolated from the other utility areas. The waste oil generation from the plant is about 37 kl /annum. After expansion of the cement plant, with new Unit – IV and WHRB operations coming in the total waste oil quantity generation will be about 70 kl/annum. The waste is burnt in the kiln. OCL proposes to increase the greenbelt area from 110 to 175 acres.
- 28.2.16 It has been reported that Consent Order for operation of the plant issued by TSPCB vide letter no. TSPCB/CFO/NZB/HO/2017-830 Dated 01.06.2017 and is valid up to 30.6.2022.
- 28.2.17 Public Hearing for the project was held on 20/08/2019 by State Pollution Control Board at 10:30AM at Gram Panchayath office, Devapur village, Kasipet mandal, Mancherial District. under the chairmanship of Sri Y. Surender Rao, Joint Collector & Additional District Magistrate, Mancherial District for Increase of Clinker production capacity from 3.50 to 6.50 MTPA., Cement production capacity from 3.07 to 7.60 MTPA. And Power generation capacity from 50 MW to 75 MW by installing 25 MW Waste Heat Recovery Based Power Plant at Devapur village, Kasipet mandal, Mancherial District, Telangana State Summary of the Public hearing issues along with action plan and budget are given below. An amount of Rs. 558 Lakhs has been earmarked to address the issues raised during public consultation.

| ISSUE | RESPONSE | ACTION PLAN | BUDGET |
|---------------------------------------|---|---|--|
| <p>Employment to the locals only.</p> | <p>Plant has provided employment to 2583 persons.</p> <p>In the existing plant, 60% of the employment has been provided to the people from Devapur ((all villagers are tribal) and adjacent villages and 30% from the people of Telangana State i.e. the total of 90% preference has been given to the people of Telangana.</p> <p>As regards the employment in the expansion unit, Telangana Govt will set-up skill development centres to train the people and accordingly people will be considered for the employment from the centre as per the requirement.</p> <p>Under expansion, 588 persons will be provided employment (345 direct employment and 243 indirect employment)</p> | <p>Locals will be preferred for employment.</p> <p>Training & Skill Development for Devapur and surrounding Villagers</p> <p>Women training – Tailoring and providing sewing machine – 600 persons.</p> <p>Mechanic Training in the fields of electrical, welding, plumbing, auto mechanic – providing Tools – 200 persons.</p> | <p>Rs 60 lakhs in the next 2 years</p> |
| <p>Development works in villages.</p> | <p>Roads have been made wherever necessary. Two schools i.e. English Medium and Telugu Medium Schools have been established for the children of Devapur and to the nearby villagers. Health Centre is provided to take care of the health of the above-mentioned people. After ascertaining any further requirement, the same shall be met accordingly.</p> | <p>Various developmental measures proposed are given below.</p> <ul style="list-style-type: none"> • Training & Skill Development for Devapur and surrounding Villagers • Women training – Tailoring and providing sewing machine – 600 persons. • Mechanic Training in the fields of electrical, welding, plumbing, auto mechanic – providing Tools – 200 persons. • Construction of a bus shelters in Devapur village at 3 locations • Provision of computers to the local school – 20 nos • Expansion of Public toilets at 3 location in the Devapur village • Provision of RO plant for drinking | <p>Rs 5.58 Crores allotted</p> |

| ISSUE | RESPONSE | ACTION PLAN | BUDGET |
|--|---|---|--|
| | | water in Devapur villages – 8 nos • Expansion of existing dispensary from 5 beds to 10 bedded facility with required infrastructure of OCL open to outsiders • Repair of internal village roads & drainages (Avg. 2-4 km of internal roads per village - Devapur Village • Development of playground with necessary facilities in 2 villages- Devapur and Kasipet • Development of market yard at Devapur Gram Panchayat office • Providing LED street lighting with solar panels at Devapur and Maddimada Villages • Provision of Garbage collection vans in Devapur village -4 nos • Plantation under 'Telangana ku Haritha Haram" on the roads & land allotted by Dist. Administration. | |
| Laying of roads, sewerage, and water supply and electricity lines in the village | Roads have been made wherever necessary. As regards the drinking water for the inhabitants of the villages and also to the cattle, nearby ponds are being cleaned and deepened from time to time However, whenever any necessity arises, OCL will take necessary initiative in this direction. | The repairing of roads and drainage facilities be taken up. Repair of internal village roads & drainages (Avg. 2-4 km of internal roads per village @ 15 lakhs/km) – Devapur Village Provision of RO plant for drinking water in Devapur villages (Rs. 5 lakhs per RO Plant) – 8 nos | Roads and drainages at Rs 180 lakhs in three years Rs 40 Lakhs in two years |
| Ground for sports and a meeting hall for community. | OCL shall make all-out efforts to provide Sports Ground | Development of playground with necessary facilities in 2 villages (Rs. 5 lakhs per village)- Devapur and Kasipet | Rs 20 Lakhs in two years |

| ISSUE | RESPONSE | ACTION PLAN | BUDGET |
|--|--|---|---------------------------|
| Establish a hospital at Devapur to cater to the needs of the local residents | OCL has full-fledged hospital which is made available to its employees as well as to the people of Devapur and also to the nearby areas. This hospital can be further equipped with various advanced facilities to cater to the medical requirements. | To further strengthen the hospital from 5 bed to 10 Beds with all facilities. | Rs. 45 lakhs in two years |
| Co-operation of the industry in the implementation of the organic agriculture. | OCL is committed to maintain eco-friendly environment in and around areas of the Plant for which OCL undertakes plantation activities and other measures as per the norms of Pollution Control Board and MoEF so as to secure the desired yield from the agricultural lands and to improve better living conditions as well. | To encourage the organic farming. Plantation under 'Telangana ku Haritha Haram" on the roads & land allotted by Dist. Administration. Local species Neem, cassasimea, Jamun, Awala etc – 15000 Saplings @Rs 200 per sapling | Rs. 30 lakhs in two years |

The management responded positively to the above demands and had acceded to allot about Rs 5.58 Crores, towards the above demands to be implemented in the form of Environmental Management Plan.

PUBLIC HEARING COMMITMENTS AND ACTION PLAN AND BUDGET

| S.No | NAME OF ACTIVITY | Year | | | |
|--------------------|--|---|-------|-------|---|
| | | 21-22 | 22-23 | 23-24 | |
| Amount in Rs Lakhs | | | | | |
| 1 | Training & Skill Development for Devapur and surrounding Villagers | Women training – Tailoring and providing sewing machine – 600 persons | 30 | 0 | 0 |
| | | Mechanic Training in the fields of electrical, welding, plumbing, auto mechanic – providing Tools – 200 persons | 0 | 30 | 0 |
| 2 | Construction of a bus shelters in Devapur village at 3 locations | 10 | 0 | 0 | |
| 3 | Provision of computers to the local school – 20 nos. | 6 | 0 | 0 | |
| 4 | Expansion of Public toilets at 3 location in the Devapur village | 10 | 10 | 10 | |
| 5 | Provision of RO plant for drinking water in Devapur villages (Rs. 5 lakhs per RO Plant) – 8 nos. | 20 | 20 | 0 | |

| S.No | NAME OF ACTIVITY | Year | | |
|------|---|--------------------|------------|-----------|
| | | 21-22 | 22-23 | 23-24 |
| | | Amount in Rs Lakhs | | |
| 6 | Expansion of existing dispensary from 5 beds to 10 bedded facility with required infrastructure of OCL open to outsiders | 0 | 45 | 0 |
| 7 | Repair of internal village roads & drainages (Avgss. 2-4 km of internal roads per village @ 15 lakhs/km) – Devapur Village | 60 | 60 | 60 |
| 8 | Development of playground with necessary facilities in 2 villages (Rs. 5 lakhs per village) – Devapur and Kasipet | 10 | 10 | 0 |
| 9 | Development of market yard at Devapur Gram Panchayat office | 0 | 25 | 0 |
| 10 | Providing LED street lighting with solar panels (25 nos. per village @ Rs. 25,000/- each) at Devapur and Maddimada Villages | 60 | 20 | 0 |
| 11 | Provision of Garbage collection vans in Devapur village (Rs. 8 Lakhs / van) – 4 nos. | 32 | 0 | 0 |
| 12 | Plantation under ‘Telangana ku Haritha Haram" on the roads & land allotted by Dist. Administration. Local species Neem, cassasimea, Jamun, Awala etc – 15000 Saplings @Rs 200 per sapling | 15 | 15 | 0 |
| | TOTAL | 253 | 235 | 70 |

28.2.18 The cost of the proposed expansion is estimated to be about Rs. 2100 Crores which includes the cost of Environmental Management Plan of Rs. 5288 Lakhs (Rs. 52.88 crores) (including Public Hearing Commitments).

| | Capital Cost (Rs. Lakhs) | Recurring Cost per annum (Rs. Lakhs) |
|---|-----------------------------|---|
| Air pollution control equipment - Unit-IV | 4084 | 94 |
| Environment Monitoring | 181 | 56 |
| Effluent Treatment Plant – CPP (WHRB) | 75 | 5 |
| Rainwater harvesting | 10 | 2 |
| Greenbelt (additional GB in 65 acres) | 50 | 15 |
| Wildlife Conservation Plan | 330 | 0 |
| Public Hearing Commitments (Activities given below in table) | 558 | 0 |
| Total | 5288 | 172 |

Note * Included as part of EMP budget as per MOEFCC Office Memorandum F.NO 22-65/2017-IA.III dated 30th September, 2020

28.2.19 The total manpower required is about 3171 persons (Direct & Indirect). The details of manpower of OCL are given below:

| S. No | Description | Direct | Indirect | Total |
|-------|-------------|--------|----------|-------|
| 1 | Existing | 578 | 2005 | 2583 |
| 2 | Proposed | 345 | 243 | 588 |
| Total | | | | 3171 |

28.2.20 The Cement plant is presently located in an area of 425.91 acres and after expansion the total area of the cement plant will be increased to 436.91 acres (an additional area of 11 Acres will be required /used for expansion). The required greenbelt as per norms is 33% of the plant area. OCL has already developed greenbelt in an area of 110.00 Acres in plant premises, colony premises along the roads and other vacant areas. And now proposes to develop the greenbelt in additional area of 65.0 acres. The total area under greenbelt after expansion will be 40%.

28.2.21 The proponent has mentioned that there is no court case or violation under EIA Notification to the project and its site.

Observations of the Committee:

28.2.22 The Committee noted the following:

- i. Green belt shall be developed in 40% area. Tree density has been indicated as 600 trees only per acre against the requirement of 1000 trees per acre.
- ii. Waste oil generated in the plant is proposed to be burnt in the kiln. No proposal for recycling of the same by registered recyclers.
- iii. NOx level from Kiln IV are higher than other old kilns. Measures to reduce NOx have not been described.
- iv. No details are available on energy conservation measures.
- v. Parking area for 50 vehicles only has been provided inside the factory premises.
- vi. TOR point # 9 has not been addressed as per requirement. EMD organization chart shows the environment function not reporting to full time director on the Board.
- vii. PH issues need to be revised to present year wise completion schedule.
- viii. STP for domestic waste water treatment along with filter press not provided.
- ix. Emission calculations shall be reworked out as the GLC calculations with 3 D terrain has not been done.
- x. Dioxin and Furan monitoring schedule not discussed.
- xi. Water requirement is met from ground water and mine pit water. No attempt has been made to explore surface water availability.
- xii. Layout drawing is to be revised to exclude 11 acres of land which is not required.
- xiii. EIA Report does not quantify impacts and mitigation measures.

Recommendations of the Committee:

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

28.3 Change in Plant Configuration and Product Mix of Proposed 3.0 MTPA Integrated Steel Plant including 1.5 MTPA Cement Plant and 200MW CPP by **M/s. Welspun Metallics Limited** located at Village: Versamedi, Tehsil: Anjar, District: Kutch, Gujarat, Kutch, Gujarat [Online Proposal No. IA/GJ/IND/190966/2021; File No. J-11011/136/2015-IA II (D)] **-Environment Clearance under para 7(ii) of EIA, 2006 and part transfer of EC with respect to DI pipe unit – regarding.**

28.3.1 **M/s Welspun Metallics Limited (WML)** has made an online application vide proposal no. IA/GJ/IND/190966/2021 dated 06/01/2021 along with copy of EIA/EMP report and Form-2 seeking Environment Clearance (EC) under the provisions of the para 7(ii) of EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) “Metallurgical industries (ferrous & non-ferrous)” under Category “A” of the schedule of the EIA Notification, 2006 and doesn’t attract general condition.

Details submitted by the project proponent

28.3.2 The project of M/s Welspun Metallics Limited (WML) located in Versamedi Village, Anjar Tehsil, Kutch District, Gujarat is for Change in Plant Configuration and Product Mix of the Proposed 3.0 MTPA Integrated Steel Plant including 1.5 MTPA Cement Plant and 200MW CPP.

28.3.3 Environmental site settings

| S. No. | Particulars | Details | Remarks |
|---------------|---|--|--|
| i. | Total land | 231.58 ha [Private: 231.58 ha] | Land use: Industrial |
| ii. | Land acquisition details as per MoEF&CC O.M. dated 7/10/2014 | All land parcels are already in possession of Welspun | |
| iii. | Existence of habitation & involvement of R&R, if any. | NIL | |
| iv. | Latitude and Longitude of the project site | Latitudes (North) - From 23.106389 To 23.131389 Longitudes (East) - From 70.0675 To 70.098888 | - |
| v. | Elevation of the project site | 35 m above msl | - |
| vi. | Involvement of Forest land if any. | No Forest Land Involved | Status of stage I Forest Clearance: Not Applicable |
| vii. | Water body exists within the project site as well as study area | Project site: None Study area: Sang River 0.5 Km South | - |

| S. No. | Particulars | Details | Remarks |
|--------|--|------------------|---------|
| viii. | Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area | Study area: None | - |

28.3.4 The existing project was accorded environmental clearance vide Ir.no. J-11011/136/2015-IA II (I) dated 28/02/2017 and Consent to Establish vide Ir. No. PC/CCA-KUTCH-1513/GPCB ID-59424/ dated 13/04/2018. Consent to Operate for the project is yet to be accorded as the plant is not yet constructed.

28.3.5 Implementation status of the existing EC [Only for expansion and clause 7(ii) cases]: The plant construction is not yet started.

28.3.6 The unit configuration and capacity of existing [Only for expansion and clause 7(ii) cases] and proposed project is given as below:

| S. No. | Name | Existing Units | | Proposed Units | | Total (Existing + Proposed) | |
|--------|---|---|-----------------|--|-----------------|---|-----------------|
| | | Configuration | Production MTPA | Configuration | Production MTPA | Configuration | Production MTPA |
| 1 | Coke Ovens | 2X58 Ovens | 1.37 | - | - | 2X58 Ovens | 1.37 |
| 2 | Sinter Plant | 1X496 m ² | 5.28 | - | - | 1X496 m ² | 5.28 |
| 3 | Blast Furnace (Along with Pig Casting Machine of matching Capacity) | 1X4300 m ³ | 3.34 | - | - | 1X4300 m ³ | 3.34 |
| 4 | SMS | BOF - 2 X 165 T LF - 2 X 165 T VD - 1 X 165 T | 3.1 | (Unpropose) BOF - 1 X 165 T LF - 1 X 165 T | (-) 1.55 | BOF - 1 X 165 T LF - 1 X 165 T VD - 1 X 165 T | 1.55 |
| 5 | Continuous Slab Casting | 1 x 1 strand | 1.6 | - | - | 1 x 1 strand | 1.6 |
| 6 | Continuous Billet Casting | 1 x 6 strand | 1.4 | (Unpropose) 1 x 6 strand | (-) 1.4 | - | 0 |
| 7 | Rebar & Wire Rod | 1 Unit | 1.37 | 1 Unit | (-) 1.37 | - | 0 |

| S. No. | Name | Existing Units | | Proposed Units | | Total (Existing + Proposed) | |
|--------|--|--------------------|--------------------|----------------------------|--------------------|--------------------------------|------------------------|
| | | Configur- ation | Production MTPA | Configuration | Production MTPA | Configurat ion | Producti on MTPA |
| | Mill | | | | | | |
| 8 | Captive Power Plant | Gas based | 200 MW | Gas based | 200 MW | Gas based | 200 MW |
| 9 | Lime & Dolo Plant | 2 x 600 TPD | 0.34 | (Unpropose) 1 x 600 TPD | (-) 0.17 | 1 x 600 TPD | 0.17 |
| 10 | Cement Grinding Plant | 1 Unit | 1.5 | 1 Unit | 1.5 | 1 Unit | 1.5 |
| 11 | DI Pipe Plant (Including Induction Furnaces, Convector, Centrifugal Casting Machine, Annealing Furnace, Finishing Line.) | - | - | 2 Units | 0.5 | 2 Units | 0.5 |
| 12 | Foundry Shop for Metal Fitting and other casting using Heating and Melting Furnace (Induction Furnace) and Sand Moulding Facility. | - | - | 1 Unit | 0.1 | 1 Unit | 0.1 |

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

| S. No. | Raw Material | Quantity required per annum | | | Source | Distance from site (Kms) | Mode of Transportation |
|--------|----------------|-----------------------------|-----------|---------|-------------|--------------------------|------------------------|
| | | Existing | Expansion | Total | | | |
| 1. | Iron Ore fines | 4080600 | 0 | 4080600 | Open Market | 30 | Road |

| S. No. | Raw Material | Quantity required per annum | | | Source | Distance from site (Kms) | Mode of Transportation |
|--------|--------------------------|-----------------------------|------------|---------|-------------|--------------------------|------------------------|
| | | Existing | Expansion | Total | | | |
| 2. | Lignite | 88810 | (-) 44405 | 44405 | Open Market | 30 | Road |
| 3. | Zinc Wire | 0 | 2600 | 2600 | Open Market | 30 | Road |
| 4. | Limestone fines | 639200 | 0 | 639200 | Open Market | 30 | Road |
| 5. | Dolomite fines | 320800 | 0 | 320800 | Open Market | 30 | Road |
| 6. | Limestone | 583100 | (-) 291550 | 291550 | Open Market | 30 | Road |
| 7. | Dolomite | 195900 | (-) 97950 | 97950 | Open Market | 30 | Road |
| 8. | Steel Scrap | 0 | 79400 | 79400 | Open Market | 30 | Road |
| 9. | Magnesium | 0 | 6600 | 6600 | Open Market | 30 | Road |
| 10. | Calcined Lime | 0 | 600 | 600 | Open Market | 30 | Road |
| 11. | Coking Coal | 1914300 | 0 | 1914300 | Open Market | 30 | Road |
| 12. | Iron Ore for SMS | 65900 | (-) 32950 | 32950 | Open Market | 30 | Road |
| 13. | Non coking coal for COP | 100700 | 0 | 100700 | Open Market | 30 | Road |
| 14. | Iron ore lump (BF grade) | 1267800 | 0 | 1267800 | Open Market | 30 | Road |
| 15. | PCI Coal | 643800 | 0 | 643800 | Open Market | 30 | Road |
| 16. | Ferro Silicon | 0 | 16800 | 16800 | Open Market | 30 | Road |

28.3.8 The water requirement for the project is estimated as 42120 m³/day, out of which 42120 m³/day of fresh water requirement will be obtained from the Treated Sewage from Welspun India Limited's STP. The permission for drawl of Treated Sewage water is obtained from Welspun India Limited vide Lr. No. WIL/2020/0089 dated 01/09/2020.

28.3.9 The power requirement for the project is estimated as 211 MW, out of which 200 MW will be generated in the Captive Power Plant and balance shall be obtained from Welspun Captive Power Generation Limited.

28.3.10 Baseline Environmental Studies

| | |
|--------------------------------------|---|
| Period | December 2015 to March 2016 |
| AAQ parameters at 8 locations | PM _{2.5} = 35.2 to 58.6 µg/m ³ PM ₁₀ = 67.7 to 105.5 µg/m ³ SO ₂ = 4.5 to 20 µg/m ³ NO _x = 18.5 to 56.2 µg/m ³ CO = 300 to 1900 µg/m ³ |
| AAQ modelling | PM ₁₀ = 8.7 µg/m ³ SO ₂ = 10.9 µg/m ³ NO _x = 16.4 µg/m ³ |
| Ground water quality at 8 locations | pH: 6.8 to 8, Total Hardness: 244 to 1364 mg/l, Chlorides: 367.3 to 4175.9 mg/l, Fluoride: 0.4 to 5.6 mg/l. Heavy metals are within the limits. |
| Surface water quality at 8 locations | pH: 7.6 to 8.6; DO: 1.2 to 6.4 mg/l and BOD: from 4 to 111 mg/l. COD from 14.9 to 375 mg/l |
| Noise levels | 53.1 to 69.1 for the day time and 44.4 to 58.2 for the Night time. |
| Traffic assessment study findings | - |
| Flora and fauna | Schedule I fauna is not present in Study Area. |

28.3.11 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 |
|--------|------------------------|---------------------------------------|--------------------------|------------------------------|
| 1 | Industrial Solid Waste | Mg Dust from DI Plant | 23 | Co-Processing |
| 2 | Hazardous Waste | Zinc Dust | 50 | Authorized Recyclers |
| 3 | Industrial Solid Waste | Iron and Steel Scrap | 80300 | Co-Processing |
| 4 | Industrial Solid Waste | BF Slag | 1241000 | Co-Processing |
| 5 | Industrial Solid Waste | SMS Slag | 273750 | Co-Processing |
| 6 | Industrial Solid Waste | DE System Dust, BF Flue Dust, Sludges | 51100 | Co-Processing |
| 7 | Industrial Solid Waste | Lime & Dolo Fines | 34675 | Co-Processing |
| 8 | Hazardous Waste | BOD, Tar Sludge, Used Oil, Batteries | 4380 | Authorized Recyclers |

28.3.12 Public Consultation for the existing project was held on 14/09/2016.

28.3.13 The capital cost of the project is Rs 14,690 Crores and the capital cost for environmental protection measures is proposed as Rs 425 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 10 Crores. The employment generation from the proposed project / expansion is 3040. The details of cost for environmental protection measures is as follows:

| S.No. | Description of Item | Existing (Rs. In lakhs) | |
|-------|---|-------------------------|----------------|
| | | Capital Cost | Recurring Cost |
| i. | Air Pollution Control/ Noise | 18000 | 1000 |
| ii. | Water Pollution Control | 5500 | |
| iii. | Environmental Monitoring and Management | 3000 | |
| iv. | Occupational Health, Rainwater Harvesting & Energy Conservation | 14000 | |
| v. | Green Belt Development | 2000 | |
| vi. | Addressal of Public Consultation concerns | 36800 | - |

28.3.14 Greenbelt will be developed in 77.3 ha which is about 33.4 % of the total project area. A 80-100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 1600 trees per hectare. Total no. of 123680 saplings will be planted and nurtured in 77.3 hectares in 1.5 - 2 years.

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

| Particulars | As per EC dated 28/02/2017 | After proposed change under para 7(ii) | % increase |
|---------------|--|---|-----------------------|
| Land | 231.58 ha | 231.58 | 0 |
| Greenbelt | 77.2 | 77.3 | 0.1 % |
| Water | 1968 m ³ /hr | 1755 m ³ /hr | -10.8 % |
| Power | 263 MW | 211 MW | -19.8 % |
| Raw materials | 9.9 MTPA | 9.54 MTPA | -3.6 % |
| Products | - 1.6 MTPA Slabs | - 1.5 MTPA Slabs | -6.2 % |
| | - 1.37 MTPA Rebars and Wire Rods from 1.4 MTPA Billets | - 0.5 MTPA DI Pipes - 0.1 MTPA Metal and Casting Fitting | Change in Product Mix |
| | - 1.5 MTPA Cement | - 1.5 MTPA Cement | No Change |

| | | | |
|--|---|---|-----------|
| | - | - | |
| | - Pig Iron of Balance Available Hot Metal | - Pig Iron of Balance Available Hot Metal | No Change |

28.3.16 Pollution load assessment

| Particulars | As per EC dated 28/02/2017 | After proposed change under para 7(ii) | % increase |
|---------------------------|--|--|--|
| Air | PM – 292.2 Kg/hr SO ₂ – 581 Kg/hr NO _x – 909 Kg/hr | PM – 273.1 Kg/hr SO ₂ – 551.8 Kg/hr NO _x – 869.3 Kg/hr | PM – (-)6.5% SO ₂ – (-)5% NO _x – (-)4.4% |
| Water | Zero Effluent Discharge | Zero Effluent Discharge | 0 |
| Solid and Hazardous waste | 2059430 TPA | 16,85,278 TPA | -18.2 % |
| Traffic load | ~270 Trucks per day | ~260 Trucks per day | -3.7 % |

28.3.17 Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration shall be furnished. – Not Applicable

28.3.18 Name of the EIA consultant: M/s MECON Limited [S.No. 110, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1619/RA 0068].

28.3.19 Certified compliance report from Regional Office [Only for expansion and clause 7(ii) cases] - The plant construction is yet to be started. Therefore, the Status of compliance of earlier EC was not obtained.

Observation of the committee

28.3.20 The Committee noted the following:

- i. Construction of 3 MTPA plant against EC of Feb 2017 and Oct 2020 has not started as yet.
- ii. PP wants to install a 0.5 MTPA DI pipe and 0.1 MTPA foundry and drop one 165 T BOF converter, one 600 TPD Calcination kiln, 165 T LF, 1.4 MTPA billet caster and 1.37 MTPA Bar and Rod Mill.
- iii. Plant area is 231.58 ha located in WASEZ Industrial park.
- iv. Water consumption is reduced to 1755 m³/hr from 1968 m³/hr due to this change.
- v. Anjar area is highly polluted. (98 percentile values of PM 10 at almost all monitoring stations exceed 100 ug/m³).

- vi. Surface water in the entire area is polluted and found having BOD up to 111 ppm and COD values up to. 353.2 ppm.
- vii. Estimated pollution load before and after the proposed change is furnished below:

| Pollutant Release , Kg/Hr | PM | SO ₂ | NO _x |
|-----------------------------|--------------|-----------------|-----------------|
| As per original EC | 292.2 | 581.0 | 909.0 |
| After revised configuration | 273.1 | 551.8 | 869.3 |
| Net Change Kg/hr (%) | 19.1 (- 6.5) | 29.2 (- 5.0) | (-4.4) |

- viii. There is an overall decrease in pollution after the proposed change including water consumption that will be reduced from 2.9 Cum/tcs to 2.4 Cum/tcs.
- ix. Coal tar and BOD plant sludge shall be recycled to coke ovens.
- x. TRT, CDQ, BOF Dog House, COG desulfurization to produce elemental sulphur are committed.
- xi. NO_x emission shall be controlled by providing low NO_x stage combustion burners and recycle of flue gases.
- xii. 189 acres of land within the plant shall be used for green belt development with a tree density of 1600 trees per ha.
- xiii. Overall the proposal is beneficial to environment.
- xiv. The EAC has carried out requisite due diligence of the instant proposal and considered the same under para 7(ii) (a) of the EIA Notification, 2006 and dispense with the requirement of conducting fresh public consultation in light of the observations mentioned above.

Recommendation of the committee

28.3.21 In view of the foregoing and after detailed deliberations, the committee recommended the instant proposal for grant of Environment Clearance under para 7(ii) of EIA Notification, 2006 subject to the following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to integrated steel plants based on project specific requirements:

A. Specific conditions

- i. CEMS shall be provided on all process stacks and the signal shall be received in plant control room for central control of APCDs installed in the plant.
- ii. Ventilation system for odour control in bitumen coating area shall be included.
- iii. Zn dust monitoring in AAQ in DI plant shall. Be carried out.
- iv. ETP shall be provided for DI plant exclusively with the provision of safe handling of hazardous waste generated in DI Plant.
- v. PM level from the stacks shall be less than 30 mg/Nm³.
- vi. 100 % use / recycle of solid waste generated in DI plant shall be ensured.
- vii. Tree density in Green belt shall be 2500 trees per ha. WDI Plant shall have 36.6 % green belt as committed by PP.
- viii. Heat rate of Power Plant shall be 2600 Kcal/kwh. Heat rate is 2200 K Cal/KWh.
- ix. Both plants shall have their independent green belts.

- x. Validity of split ECs shall be from Feb 2017.
- xi. Plant CEMS monitoring station shall be in the plant control room and shall be integrated with plant alarm and ESD system. This shall be ISA compliant raising first Hi Alarm at 80% of emission limit, second alarm (HI-HI) at 90%, before tripping at 100% limit. All sensors shall have valid calibration certificate.
- xii. More efficient bags such as PTFE bags shall be used in the filter bag house and designed for 150% of normal design air flow.
- xiii. PP shall use ultralow NOx burner with three stage combustion, flue gas recirculation and auto combustion control system.

B. General conditions

I. Statutory compliance:

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

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. The cameras shall be installed at suitable locations for 24X7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings.
- iv. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
- v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- vi. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

- vii. Secondary emission control system shall be provided at SMS Converters.
- viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- ix. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- x. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
- xi. Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).
- xii. Land-based APC system shall be installed to control coke pushing emissions.
- xiii. Monitor CO, HC and O₂ in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.
- xiv. Vapor absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.
- xv. In case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NO_x control facility shall be provided to meet the prescribed standards.
- xvi. The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.
- xvii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xviii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.
- xix. The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter.
- xx. Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke

III. Water quality monitoring and preservation

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

according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;
- iv. Adhere to 'Zero Liquid Discharge'
- v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- vii. Tyre washing facilities shall be provided at the entrance of the plant gates.
- viii. CO₂ injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.
- ix. The project proponent shall practice rainwater harvesting to maximum possible extent.
- x. Treated water from ETP of COBP shall not be used for coke quenching.
- xi. Water meters shall be provided at the inlet to all unit processes in the steel plants.
- xii. The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

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

- ii. Coke Dry Quenching (CDQ) shall be provided for coke quenching for the coke oven plant.
- iii. Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines.
- iv. Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.
- v. Use hot charging of slabs and billets/blooms as far as possible.
- vi. Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C.
- vii. Explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed.
- viii. Restrict Gas flaring to < 1%.
- ix. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- x. Provide LED lights in their offices and residential areas.
- xi. Ensure installation of regenerative type burners on all reheating furnaces.

VI. Waste management

- i. An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.
- ii. Tar Sludge and waste oil shall be blended with coal charged in coke ovens.
- iii. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.
- iv. Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.
- v. Used refractories shall be recycled as far as possible.
- vi. SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.
- vii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.

- viii. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.
- ix. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

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

VIII. Public hearing and Human health issues

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

IX. Corporate Environment Responsibility

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

X. Miscellaneous

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

- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM10, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

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

28.3.22 In addition to the above, PP has requested for part transfer of EC with respect to DI pipe unit in the name of M/s. Welspun DI Limited for which separate application has been submitted by the proponent vide proposal no. IA/GJ/IND/190956/2021 along with the following documents:

- i. "NOC" from M/s Welspun Metalics Limited
- ii. "Undertaking" from M/s Welspun DI Limited
- iii. Revised Environment management plan by WML and WDIL
- iv. Revised Plant Layout with area and green belt detail by WML and WDIL
- v. EC condition compliance Responsibility Matrix between WML and WDIL

28.3.23 In this regard, after deliberations, the committee formed a sub-committee comprising of the following to examine the documents submitted by the project proponent and furnish a report to the EAC for taking appropriate view in the matter.

- i. Shri. R.P.Sharma, EAC Member,
- ii. Shri. J.S. Kamyotra, EAC Member,

For the above purpose, Shri. Sundar Ramanathan, Scientist 'E', MoEF&CC would be co-opted as a member of the above subcommittee.

28.4 Expansion of Vardhman Special Steels Limited from 2,00,000 TPA of Rolled Steel to 2,80,000 TPA of Rolled Steel **by M/s Vardhman Special Steels Limited** located at Village Dhandari Kalan/ Jamalpur, Tehsil-Ludhiana, **District Ludhiana, Punjab** - [Online Proposal No. IA/PB/IND/190704/2013, File No. J-11011/74/2013-IAII(I)] - **Environment Clearance – regarding.**

28.4.1 M/s. Vardhman Special Steel Limited has made an online application vide proposal no. IA/PB/IND/190704/2013 dated 31/12/2020 along with copy of EIA/EMP report and Form-2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and attracts general condition as the project site falls under Critically Polluted Area, as per MoEF&CC OM dated 31st October, 2019 and is appraised at Central Level.

Details submitted by the project proponent

28.4.2 The detail of the ToR is furnished as below:

| Date of application | Consideration | Details | Date of accord |
|----------------------------|----------------------|----------------|-----------------------|
|----------------------------|----------------------|----------------|-----------------------|

| | | | |
|------------|--|--------------------|------------|
| 24/09/2019 | 12 th meeting of EAC held on 22/10/2019 | Terms of Reference | 03/02/2020 |
|------------|--|--------------------|------------|

28.4.3 The project of M/s Vardhman Special Steel Limited located in Dhandari Kalan/ Jamalpur Village, Ludhiana Tehsil, Ludhiana District, Punjab State is for enhancement of production of rolled products from 2,00,000 TPA to 2,80,000 TPA.

28.4.4 Environmental site settings

| S. No. | Particulars | Details | Remarks |
|--------|---|--|--|
| i. | Total land | 11.23 ha/27.75 acres | Land use: govt. approved industrial area |
| ii. | Land acquisition details as per MoEF&CC O.M. dated 7/10/2014 | Land is already acquired by VSSL | - |
| iii. | Existence of habitation & involvement of R&R, if any. | The proposed project is located in the existing site and hence does not involve Rehabilitation and Resettlement Plan (R&R). | - |
| iv. | Latitude and Longitude of the project site | Latitude 30053'12.60'' N to 30053'11.46'' N & Longitude 75054'17.57'' E to 75054'10.77'' E | - |
| v. | Elevation of the project site | 243 m | - |
| vi. | Involvement of Forest land if any. | Proposed expansion area is within existing plant. Therefore no forest land is involved. | - |
| vii. | Water body exists within the project site as well as study area | <u>Project site:</u> There is no natural nala or stream passing through the project site. <u>Study area</u> (1) Buddha Nala, 3.2 km, NNE (2) Sidhwan Canal (Sidhwan Branch), 4.7 km, SW (3) Sidhwan Canal (Abohar Branch), 10.9 km, S (4) Satluj River, 12.2 km, NNW | - |

| S. No. | Particulars | Details | Remarks |
|--------|--|--|---------|
| viii. | Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area | <u>Study area</u> There is no Wildlife Sanctuary/ National Park/ Biosphere Reserve and interstate/International boundary within 15 km radius study area of the project. However, the project falls in Critically Polluted Area (CPA). | |

28.4.5 The existing project was accorded environmental clearance vide Ir. no. J-11011/742013-IA II (I) dated 30th June 2015. Consent to Operate for the existing unit was accorded by Punjab Pollution Control Board for (a) Air having consent no. CTOA/Varied/LDH1/2018/7259435, with validity up to 31/03/2021 and (b) Water having consent no. CTOW/Varied/LDH1/2018/7029237, with validity up to 31/03/2021.

28.4.6 Implementation status of the existing EC

| Sl. No. | Facilities | Units | As per EC dated 30 th June, 2015 | Implementation Status as on 12/01/201 | Production as per CTO |
|---------|---|-------|---|---------------------------------------|-----------------------|
| 1. | Productivity Improvement Through Technological Up-gradation of the Steel Melting Shop with Electric Arc Furnace from 1, 25,000 TPA to 2, 00,000 TPA | - | 1,25,000 TPA | 2,00,000 TPA | 2,00,000 TPA |

28.4.7 The unit configuration and capacity of existing and proposed unit are given as below:

| S. No | Name | Existing Units | | Proposed Units | | Total (Existing) | |
|-------|------------------------|--------------------------------|-------------------------|---|-------------------------|---|--------------------------|
| | | Configuration | Production TPA | Configuration | Production TPA | Configuration | Production TPA |
| 1 | Electric Arc Furnace | 33 t (30t Nominal Capacity) | 200,000 of Liquid steel | 40 t (35t Nominal Capacity (after upgradation of existing EAF) | 100,000 of Liquid steel | 40 t (35t Nominal Capacity (after upgradation of existing EAF) | 3,00,000 of Liquid steel |
| 2 | Ladle Refining Furnace | 30 t | 200,000 of Liquid steel | 35 t | 100,000 of Liquid steel | 1*30 t 1*35 t | 3,00,000 of Liquid steel |

| S. No | Name | Existing Units | | Proposed Units | | Total (Existing) | |
|-------|--|--|----------------------------|--|---------------------------|--|-----------------------------|
| | | Configuration | Production TPA | Configuration | Production TPA | Configuration | Production TPA |
| 3 | Vacuum Degassing | 30 t | 200,000 of Liquid steel | 35 t Mechanical Degassing system (after upgradation) | 100,000 of Liquid steel | 35 t Mechanical Degassing system (after upgradation) | 3,00,000 of Liquid steel |
| 4 | Continuous Casting Machine | 2 Strand | 190,960 | 3 Strand (after upgradation of existing CCM) | 100,840 | 3 Strand (after upgradation of existing CCM) | 291,000 |
| 5 | Rolling Mill | 2,00,000 TPA | 180,686 of rolled products | 2,80,000 TPA (after upgradation of existing RM) | 99,314 of rolled products | 2,80,000 TPA (after upgradation of existing RM) | 2,80,000 of rolled products |
| 6 | Reheating Furnace | 33 t/hr (Walking Hearth type) | 190,960 | 45 t/hr (Walking Beam Type) | 100,040 | 1*33 t/hr 1*45 t/hr | 291,000 |
| 7 | Fume Extraction System With Pulse Jet Cloth Bag Filter (Primary +Secondary) | 4,60,000 Am ³ /h Common for EAF and LRF | - | (a) Keeping the existing system exclusively for EAF @4,60,000 Am ³ /h by disconnecting duct from existing LRF-1. (b) Installing 1 new system for existing LRF -1 and new LRF-2 @1,55,000Am ³ /h (c) Total fumes to be treated from EAF and LRF @6,15,000 Am ³ /h. | - | (a) Keeping the existing system exclusively for EAF @4,60,000 Am ³ /h by disconnecting duct from existing LRF-1. (b) Installing 1 new system for existing LRF -1 and new LRF-2 @1,55,000Am ³ /h | - |

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

| S. No. | Raw Material | Quantity required TPA | | | Source | Distance from site (Kms.) | Mode of Transportation |
|--------|------------------------------|-----------------------|-----------|----------|--|---------------------------|------------------------|
| | | Existing | Expansion | Total | | | |
| 1. | Purchased Scrap+ other Scrap | 98,000 | 152,484 | 2,50,842 | UK, USA, Europe, South Africa | 1400 | Trucks |
| 2. | DRI | 112,800 | 79,917 | 32,883 | Maharashtra, Dubai | 1700 | Trucks |
| 3. | Pig iron | 5846 | 27,037 | 32,883 | Chhattisgarh, Punjab, West Bengal | 1500 | Trucks |
| 4. | Lime | 20,000 | 3,280 | 23,280 | Rajasthan | 700 | Trucks |
| 5. | Carburizers | 3,000 | 1074 | 4074 | Jharkhand, Gujarat, Madhya Pradesh | 1500 | Trucks |
| 6. | Refractories (SMS) | | | | | | |
| 6.1 | Bricks | 5000 | 1696 | 6693 | China, Orissa | 1500 | Trucks |
| 6.2 | Ramming Mass | 700 | 231 | 469 | Uttar Pradesh | 900 | Trucks |
| 6.3 | Gunning Mass | 300 | 230 | 530 | Orissa | 1500 | Trucks |
| 7 | Refractories Rolling Mill | 200 | 33 | 233 | Maharashtra, Madhya Pradesh, West Bengal | 1700 | Trucks |
| 8 | Fuel & HSD | | | | | | |
| 8.1 | Fuel Oil & HSD for SMS | 2200 | 128 | 2328 | Uttar Pradesh | 900 | Trucks |
| 8.2 | Fuel Oil & HSD for Bar Mill | 7000 | 3185 | 10,185 | Uttar Pradesh | 900 | Trucks |
| 9 | Graphite Electrodes | 660 | 597 | 1257 | Madhya Pradesh, West Bengal, Maharashtra | 1500 | Trucks |
| 10 | Process Gases | | | | | | |
| 10.1 | Argon (1.786 kg/cum) | 179 | 164 | 343 | Punjab | 200 | Trucks |
| 10.2 | LPG (1.965 kg/cum) | 315 | 829 | 1144 | Punjab | 200 | Trucks |
| 11 | Ferro-Alloys | 6000 | 2148 | 8148 | Chhattisgarh, Orissa, Maharashtra, West Bengal, Punjab | 800 | Trucks |
| 12 | Lancing Pipe | 280 | 127 | 407 | (Near Mumbai) Maharashtra | 1700 | Trucks |

| S. No. | Raw Material | Quantity required TPA | | | Source | Distance from site (Kms.) | Mode of Transportation |
|--------|---|-----------------------|-----------|-------|--------------|---------------------------|------------------------|
| | | Existing | Expansion | Total | | | |
| 13 | Other misc. items like T.C. Tips, Positherm Tips etc. | 200 | 92 | 292 | Noida (U.P.) | 900 | Trucks |

28.4.9 The water requirement for the project is estimated 766 KLD, out of which 466 KLD of fresh water requirement will be obtained from the existing bore wells and the remaining requirement of 300 KLD will be met from the treated industrial water from pickling units. The application and permission for drawl of groundwater is obtained from vide application no. 21-4/1659/PB/IND/2017 dated 14/06/2017, vide application No. 21-4/4345/PB/IND/2018 dated 30/08/2018.

28.4.10 The connected load of the plant is 38 MW & the contract demand is 34.8 MVA and after expansion it will not increase.

28.4.11 Baseline Environmental Studies

| | |
|--------------------------------------|---|
| Period | October - December 2019 |
| AAQ parameters at 9 locations | PM _{2.5} = 46.0 to 84.6 µg/m ³ PM ₁₀ = 99.5 to 179.3 µg/m ³ SO ₂ = 13.1 to 25.2 µg/m ³ NO ₂ = 16.2 to 35.6 µg/m ³ CO = 540 to 790 µg/m ³ |
| AAQ modelling | PM ₁₀ = insignificant SO ₂ = 11.3 µg/m ³ NO ₂ = 10.3 µg/m ³ CO = insignificant |
| Ground water quality at 7 locations | pH: 7.4 to 7.8, Total Hardness: 272.9 to 455.0 mg/l, Chlorides: 49.1 to 85.7 mg/l, Fluoride: 0.48 to 0.79 mg/l. Heavy metals are within the limits. |
| Surface water quality at 4 locations | pH: 7.3 to 7.8; DO: 1.9 to 5.3 mg/l and BOD: 2.2 to 52.7 mg/l COD from 14.7 to 281.2 mg/l |
| Noise levels | 47.6 dB(A) to 58.9 dB(A) for the day time and 40.0 dB(A) to 54.1 dB(A) for the Night time. |
| Traffic assessment study findings | As per the survey, roads will have LoS to level C representing decline in general level of comfort. |
| Flora and fauna | No Schedule-I fauna is found in the study area. |

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

| Sl. No. | Item | Source | Quantity (TPA) | Pollution Control & Disposal |
|---------|----------------------------|--|----------------|---|
| 1. | Steel Melt Shop | | | |
| 1.1. | EAF Slag | Melting of various raw materials used in EAF like Steel Scrap, Revert Scrap, Gas based DRI, Coal based DRI, Pig Iron | 32010 | Cooling with water, breaking and using in road making, railway ballast, filling of low lying areas. |
| 1.2. | LRF Slag | Ladle Refining Furnace | 4656 | Backfilling of low lying areas |
| 1.3. | CCM scale | Cooling of continuous cast billets in CCM | 1746 | Dried and used in EAF & marketed for Sinter Plants |
| 1.4. | Fine dust from waste gases | From EAF & LRF | 4365 | Dust is packed in HDPE bags and transported to Ramky Enviro Engineers Limited, Deabassi which is PPCB approved agency for land filling. |
| 2. | Rolling Mill | | | |
| 2.1 | Mill scale | From Reheating furnace & Rolling mill | 4074 | Dried and used in EAF & marketed Sinter Plants. |

28.4.13 Public Consultation:

| | |
|--------------------------------|--|
| Details of advertisement given | 10.10.2020 |
| Date of public consultation | 10.11.2020 |
| Venue | MCL Park, Near Gate No.2 of VSSL", District - Ludhiana, |
| Presiding Officer | Sh. Amarjit Bains, Additional Deputy Commissioner (Gen), |
| Major issues raised | <ol style="list-style-type: none"> i. The industry shall clarify as to whether there will be any job opportunities with the expansion of the project. ii. The industry shall clarify as to whether there will be any additional water requirement with the expansion of the project. iii. The industry shall clarify as to whether there will be any job opportunities with the expansion of the project as he is a daily wage earner and his current work is seasonal. iv. The industry shall take a pledge to continue the plantation work after expansion in the same manner as is being done at present. v. Appreciated the efforts done by the industry towards Society under CSR initiatives and expansion of the project will create employment opportunities for all local people. vi. The industry shall clarify as to whether there will be any job opportunities for the women with the expansion of the project. vii. The industry shall clarify as to whether any maintenance and development of the road in surrounding areas can be initiated by it under CSR. |

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

| Detail of query/ statement/information/ clarification sought by the person present at the venue of hearing | Reply of the query/ statement/information/ clarification given by the project proponent | Cost | Time of compliance |
|---|---|--------------------------|---|
| The industry shall clarify as to whether there will be any job opportunities with the expansion of the project. | The project proponent informed that the employment will be generated with the expansion of the project and vacancies shall be filled as per the requirement & as per qualification of the persons. | Included in Project Cost | As per expansion requirement |
| The industry shall clarify as to whether there will be any additional water requirement with the expansion of the project. | The project proponent informed that no additional water will be required in the expansion project and arrangements have been made to utilize the industrial wastewater @300 KLD of the pickling units after treatment from J.B.R. Technologies. | Included in Project Cost | After getting EC |
| The industry shall clarify as to whether there will be any job opportunities with the expansion of the project as he is a daily wage earner and his current work is seasonal. | The project proponent informed that the employment will be generated with the expansion of the project and vacancies shall be filled as per the requirement & as per qualification of the persons. He further informed that even trainings shall be imparted to the newly recruited persons under Corporate Social Responsibility Rules as per the roles assigned to them. | Included in Project Cost | As per expansion requirement |
| The industry shall take a pledge to continue the plantation work after expansion in the same manner as is being done at present. | The project proponent informed that the plantation shall be carried out as per the Social Forestry Program in the villages, Schools and other areas allocated by the Local bodies. | 20,00,000 | 5 years under CER/ as recommended by EAC and then under CSR |
| He appreciated the efforts done by the industry towards Society under CSR initiatives and expansion of the project will create employment opportunities for all local people. | The project proponent informed that their company shall continue to give support to the society under the CSR. | - | 5 years under CER/ as Recommended by EAC and then under CSR |
| The industry shall clarify as to whether there will be any job opportunities for the women with the expansion of the project. | The project proponent informed that the employment will be generated with the expansion of the project and vacancies shall be filled as per the requirement & as per qualification of the persons which shall include the both. He further informed that even trainings shall be imparted to the newly recruited persons under Corporate Social Responsibility as per the roles assigned to them. | Included in Project Cost | As per expansion requirement |
| The industry shall clarify as to whether any maintenance and development of the road in surrounding areas can be initiated by it under CSR. | The project proponent informed that the maintenance and construction of the roads under CSR can only be done with due permission of the Local Bodies/ Govt. Departments. | 20,00,000 | 5 years under CER/ as Recommended by EAC and then under CSR and after getting due permission from Local Bodies/ Govt. |

| Detail of query/ statement/information/ clarification sought by the person present at the venue of hearing | Reply of the query/ statement/information/ clarification given by the project proponent | Cost | Time of compliance |
|---|--|------|-----------------------|
| | | | Departments. |

- 28.4.15 The capital cost of the project is Rs. 159 Crores and the capital cost for environmental protection measures is proposed as Rs. 8.4 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 1.50 Crores. The estimated manpower after completion of the project shall be 1435 personnel comprising administrative, technical, nontechnical, Skilled & unskilled work force. The details of cost for environmental protection measures is as follows:

| S. No. | Description of Item | Existing (Rs. 756 lakhs) | |
|--------|---|--------------------------|----------------|
| | | Capital Cost | Recurring Cost |
| i. | Air Pollution Control | 5.5 | 0.82 |
| ii. | Water Pollution Control | 1.0 | 0.15 |
| iii. | Environmental Monitoring and Management | 1.01 | 0.41 |
| iv. | Solid and Hazardous Waste Management | 0.45 | 0.06 |
| v. | Noise and Vibration | 0.45 | 0.06 |
| vi. | Risk and Hazard Control | 0.0095 | 0.001 |

- 28.4.16 Greenbelt/Plantation will be developed in 4.5 ha which is about 40% of the total project area including existing Plantation in the project site. A 4 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover to the extent possible 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 11,250 saplings will be planted and nurtured in 4.49 hectares in 2 years.
- 28.4.17 Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration shall be furnished.
- 28.4.18 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 28.4.19 Name of the EIA consultant: M/s Greenc India Consulting Pvt. Ltd. [S.No. 152, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021].
- 28.4.20 Certified compliance report from Regional Office:

The Status of compliance of earlier EC was obtained from Northern Regional Office,

Chandigarh vide letter no. 5-452/2013-RO(NZ)/87, dated 06.02.2020 in the name of M/s. Vardhman Special Steels Limited.

Observations of the Committee

28.4.21 The Committee noted the following:

- i. An expansion project from 2 LTPA steel to 2.8 LTPA in Focal Point Industrial Area Ludhiana, a critically polluted area with CEPI index of 73.48.
- ii. Action Plan suggested by Punjab State PCB for CEPI area of Focal point is not included in EMP chapter of EIA.
- iii. Total land area is 11.23 ha. Only 3.01 Acre land (11%) is available in the plant for Green Belt Development. Additional 3.27 ha land away from plant site in split locations has been acquired by PP to make up for 40% green belt in split locations is envisaged to be planted in the land not owned by PP under some agreement with schools, community centers etc. This not acceptable as the green belt is to be planted in the land owned by PP.
- iv. Ground and Surface water (767KLD) is used for running of the plant. Permission for GW (467 KLD) abstraction is to be renewed. Agreement to draw treated water (300kld) from a CETP in Ludhiana has been signed.
- v. Geo and Soil Conservation specialists have not been included in the team for EIA report preparation.
- vi. All signatures of team members in EIA are scanned.
- vii. TOR point# 9 has not been complied with.
- viii. RWH and recharge details have not been furnished.
- ix. PM emission from chimneys has been indicated as 40 mg/nm³ in EIA report.
- x. 98 percentile value of PM₁₀ at all 8 locations is higher than 100 µg/m³. Plant site is the most polluted with 179.3 µg/m³. PM 2.5 at plant site is 82.9 µg/m³.
- xi. Soil sampling has not been done as per CPCB guidelines.
- xii. Solid waste utilization plan for the plant has not been detailed.
- xiii. Plant is land locked and does not have space for green belt and at present polluted much beyond the acceptable limit.
- xiv. EIA does not suggest any concrete plan to make the existing plant and proposed expansion environment friendly.

Recommendations of the Committee

28.4.22 In view of the foregoing and after detailed deliberations, the Committee recommended to return the proposal in present form.

- 28.5 Proposed 2x6 MVA Submerged Electric Arc Furnaces (SEAF) unit for manufacturing of SiMn – 21,600 TPA or FeMn – 31,680 TPA or FeSi – 10,800 & FeCr – 21,600 TPA and Manganese Ore Sinter Plant (24,000 TPA) by **M/s. Victoria Ferro Alloys Private Limited** located at Plot No. 256/B & 257/B, APIIC Growth Centre, Bobbili Village & Mandal, **Vizianagram District, Andhra Pradesh** [Online Proposal No. IA/AP/IND/139184/2020, File No. J-11011/43/2020-IA. II(I)] – **Environment Clearance – regarding.**

28.5.1 M/s. Victoria Ferro Alloys Pvt. Ltd. has made an online application vide proposal no. No. IA/AP/IND/139184/2020 dated on 9th December 2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. Proposal was considered in the 26th REAC (Industry – 1) held during 16-17th December 2020. After deliberation, committee recommended to return the proposal in the present form. Subsequently, project proponent submitted Revised Final EIA report for grant of Environmental Clearance to the Ministry online on 7th January 2021 vide online proposal No. IA/AP/IND/139184/2020. The proposed project activity is listed at schedule no. 3 (a) under Category “A.” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

28.5.2 The detail of the ToR is furnished as below: (Not applicable for clause 7(ii) cases)

| Date of application | Consideration | Details | Date of accord |
|-------------------------------|--|----------------|--------------------------|
| 27 th January 2020 | 16 th EAC (Industry – 1) meeting held during 24th to 25th February 2020 | TOR accorded | 8 th May 2020 |

28.5.3 The project of M/s Victoria Ferro Alloys Pvt. Ltd. located in Plot No. 256/B & 257/B, APIIC Growth Centre, Bobbili, Bobbili Village & Mandal, Vizianagaram District, Andhra Pradesh is for setting up of a new 2 x 6 MVA Submerged Electric Arc Furnaces (SEAF) unit for manufacturing of SiMn – 21,600 TPA or FeMn – 31,680 TPA or FeSi – 10,800 or FeCr – 21,600 TPA and Manganese Ore Sinter Plant -24,000 TPA.

28.5.4 Chronology of project

- MoEF has accorded Environment Clearance for the Ferro Alloys Unit & Manganese Ore Sinter Plant on 24th July 2012.
- Management could not implement the project due to certain unavoidable circumstances within EC validity.
- Request letter for validity extension of EC was applied on 20th November 2019. However, MoEF&CC has rejected the proposal, as application was made after more than 90 days from the date of expiry i.e. 23rd July 2019
- Now fresh proposal has been submitted to MoEF&CC for grant of EC as per the provisions of EIA notification dated 14-09-2006 and its amendments thereof.
- Present Fresh proposal will be taken up in the same premises for which EC was granted i.e. 4.0 acres at Plot No. 256/B & 257/B, APIIC Growth Centre, Bobbili, Bobbili Village & Mandal, Vizianagaram District, Andhra Pradesh.

28.5.5 Environmental site settings

| S.No. | Particulars | Details | Remarks |
|--------------|---|---|--|
| i. | Total Land | 1.62 Ha. | Govt. Land (Land allotted by APIIC Ltd.) |
| ii. | Land acquisition details as per MoEF&CC OM dated 07/10/2014 | Total land is in possession of management | --- |

| S.No. | Particulars | Details | Remarks |
|-------|---|---|--|
| iii. | Existence of habitation & involvement of R & R, if any | Not applicable | Land is situated in APIIC Growth Centre, Bobbili |
| iv. | Latitude and Longitude of the project site | 18°32'55.39"N 83°19'51.71"E | --- |
| v. | Elevation of the project site | 130 AMSL | --- |
| vi. | Involvement of Forest land, if any | Not applicable | Land is situated in APIIC Growth Centre, Bobbili |
| vii. | Water Body exists within the project site as well as study area | Project site: Nil Study Area: Un-named dead canal (adjacent to the site boundary), Vegavati River – 2.8 Kms | --- |
| viii. | Existence of ESZ/ESA/National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc., if any within the study area | Study area: Nil Status of NBWL approval: Not applicable | |

28.5.6 The unit configuration and capacity of existing [Only for expansion and clause 7(ii) cases] and proposed project is given as below:

| S.No. | Plant Configuration | Production Capacity |
|---|--|--------------------------------------|
| 1. | Submerged Electric Arc Furnace [2 x 6 MVA] | Silico Manganese (SiMn) – 21,600 TPA |
| | | Or |
| | | Ferro Manganese (FeMn) – 31,680 TPA |
| | | Or |
| | | Ferro Silicon (FeSi) – 10,800 TPA |
| | | Or |
| 2. | Manganese Ore Sinter Plant | 24,000 TPA |
| Note: Jigging plant and Briquetting plant are proposed, for effective dust management | | |

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

| S.No. | RAW MATERIAL | QUANTITY (TPA) | SOURCE | DISTANCE (w.r.t Plant) | MODE OF TRANSPORT |
|----------------------------------|-----------------|----------------|--|--|--|
| Ferro Silicon (10800 TPA) | | | | | |
| 1 | Quartz | 16200 | Andhra Pradesh | ~100 Kms. | By Road (Covered trucks) |
| 2 | LAM coke | 12600 | Andhra Pradesh Imported from Australia, China | ~ 100 Kms. ~ 130 Kms. (from Vizag Port) | By Road (Covered trucks) From Vizag Port by Road (Covered Trucks) |
| 3 | MS Scrap | 2820 | Andhra Pradesh | ~100 Kms. | By Road (Covered trucks) |
| 4 | Electrode paste | 240 | Chhattisgarh / West Bengal | 350 - 600 Kms. | By Road (Covered trucks) |
| Ferro Manganese | | | | | |
| 1 | Manganese Ore | 45600 | Orissa Mining Corporation (OMC), MOIL Nagpur Imported from South Africa | ~ 500 Kms. ~ 130 Kms. (from Vizag Port) | By Road (Covered Trucks) From Vizag Port by Road (Covered Trucks) |
| 2 | LAM coke | 13200 | Andhra Pradesh Imported from Australia, China | ~ 100 Kms. ~ 130 Kms. (from Vizag Port) | By Road (Covered trucks) From Vizag Port by Road (Covered Trucks) |
| 3 | Dolomite | 5400 | Andhra Pradesh | ~100 Kms. | By Road (Covered trucks) |
| 4 | MS Scrap | 4800 | Andhra Pradesh | ~100 Kms. | By Road (Covered trucks) |
| 5 | Electrode Paste | 420 | Chhattisgarh / West Bengal | 350 - 600 Kms. | By Road (Covered trucks) |
| Silico Manganese | | | | | |
| 1 | Manganese Ore | 32400 | Orissa Mining Corporation (OMC), MOIL Nagpur Imported from South Africa | ~ 500 Kms. ~ 130 Kms. (from Vizag Port) | By Road (Covered Trucks) From Vizag Port by Road (Covered Trucks) |
| 2 | LAM coke | 1600 | Andhra Pradesh Imported from Australia, China | ~ 100 Kms. ~ 130 Kms. (from Vizag Port) | By Road (Covered trucks) From Vizag Port by Road (Covered Trucks) |
| 3 | FeMn Slag | 10800 | In house generation | --- | By Conveyers |

| S.No. | RAW MATERIAL | QUANTITY (TPA) | SOURCE | DISTANCE (w.r.t Plant) | MODE OF TRANSPORT |
|-----------------------------------|-----------------------------|----------------|--|--|--|
| 4 | Dolomite | 4920 | Andhra Pradesh | ~100 Kms. | By Road (Covered trucks) |
| 5 | Electrode Paste | 420 | Chhattisgarh / West Bengal | 350 - 600 Kms. | By Road (Covered trucks) |
| 6 | Quartz | 5160 | Andhra Pradesh | ~100 Kms. | By Road (Covered trucks) |
| Ferro Chrome | | | | | |
| 1 | Chrome ore | 37800 | Sukinda (Odisha) Import (Indonesia) | ~ 300 Kms. ~ 130 Kms. (from Vizag Port) | By Road (Covered Trucks) From Port by Road (Covered Trucks) |
| 2 | LAM coke | 13200 | Andhra Pradesh Imported from Australia, China | ~ 100 Kms. ~ 130 Kms. (from Vizag Port) | By Road (Covered trucks) From Vizag Port by Road (Covered Trucks) |
| 3 | Quartz | 5400 | Andhra Pradesh | ~100 Kms. | By Road (Covered trucks) |
| 4 | MS Scrap | 1800 | Andhra Pradesh | ~100 Kms. | By Road (Covered trucks) |
| 5 | Magnetite / Bauxite | 3600 | Andhra Pradesh | ~100 Kms. | By Road (Covered trucks) |
| 6 | Electrode Paste | 360 | Chhattisgarh / West Bengal | 350 - 600 Kms. | By Road (Covered trucks) |
| Manganese ore Sinter Plant | | | | | |
| 1 | Dust from Ferro alloy plant | 12000 | In plant generation | --- | By Conveyers |
| 2 | Manganese ore | 12480 | Orissa Mining Corporation (OMC), MOIL Nagpur Imported from South Africa | ~ 500 Kms. ~ 130 Kms. (from Vizag Port) | By Road (Covered Trucks) From Vizag Port by Road (Covered Trucks) |
| 3 | Coke | 1800 | Andhra Pradesh Imported from Australia, China | ~ 100 Kms. ~ 130 Kms. (from Vizag Port) | By Road (Covered trucks) From Vizag Port by Road (Covered Trucks) |

28.5.8 Water required for the proposed project will be 19 KLD and same will be supplied by APIIC Ltd. Letter is issued by APIIC Ltd. for supply of water vide letter no. APIIC-IALA/GC BBL/Water Connection/2019-20 dt. 24th June 2019.

28.5.9 Power required for the proposed project will be 14.5 MW. Power required for the proposed project will be supplied by APIIC Ltd.

28.5.10 Baseline Environmental Studies

| | |
|--------------------------------------|--|
| Period | 20 th December 2019 to 20 th March 2020 |
| AAQ parameters at 8 locations | PM _{2.5} = 19.7 to 37.4 mg/m ³ PM10 = 32.8 to 62.3 µg/m ³ SO ₂ = 8.6 to 16.2 µg/m ³ NO _x = 9.6 to 24.5 µg/m ³ CO = 610 to 1160 µg/m ³ |
| AAQ modelling | PM10 = 0.67 µg/m ³ SO ₂ = Nil NO _x = 5.19 µg/m ³ CO = 0.19 µg/m ³ |
| Ground water quality at 8 locations | pH: 7.2 to 7.7, Total Hardness: 195 to 352 mg/l, Chlorides: 118 to 218 mg/l, Fluoride: 0.26 to 0.41 mg/l. Heavy metals are within the limits |
| Surface water quality at 2 locations | pH: 7.2 to 7.8, DO: 3.8 to 4.2 mg/l, BOD: 2.1 to 2.9 mg/l & COD: 8.4 to 13 mg/l |
| Noise levels | 48 dBA to 59 dBA for the day time and 37 dBA to 50 dBA for the Night time. |
| Traffic assessment study finding | Traffic load before operation of proposed project (Baseline) : 6837.5 PCU/day Additional Traffic load during operation of the proposed project : 100.0 PCU/day Total Traffic load during operation of proposed project : 6937.5 PCU/day Traffic Capacity as per the IRC 73: 1980 for Highways : 10000 PCU/day Hence the existing road is capable of taking the additional traffic load due to the proposed project |
| Flora and Fauna | No schedule – 1 species present within study area |

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

| S.No. | Waste / By product | Quantity (TPD) | Method of Disposal |
|-------|----------------------------|----------------|---|
| 1 | Slag from Ferro Manganese | 61.2 | Will be reused in manufacture of SiMn as it contains high SiO ₂ and Silicon. |
| 2 | Slag from Ferro Silicon | 2.0 | Will be given to Cast iron foundries |
| 3 | Slag from Silico Manganese | 62.4 | Will be given to Road contractors (i.e. M/s. Vasi Infra LLP) for utilization in Road Construction / brick manufacturers |

| S.No. | Waste / By product | Quantity (TPD) | Method of Disposal |
|-------|------------------------|----------------|--|
| 4 | Slag from Ferro Chrome | 56.4 | Will be processed in Jigging plant for Chrome recovery. After Chrome recovery, the left-over slag will be analysed for Chrome content through TCLP test, if the Chrome content in the slag is within the permissible limits, then it will be given to Road contractors (i.e. M/s. Vasi Infra LLP) for utilization in Road Construction / brick manufacturers. If Chrome content exceeds the permissible limits, it will be sent to nearest TSDF. |
| 5 | Dust from Bagfilters | 0.05 | It will be briquetted and reused in the sinter plant |

28.5.12 Public Consultation

| | |
|--------------------------------|--|
| Details of advertisement given | 20 th September 2020 |
| Date of public consultation | 22 nd October 2020 |
| Venue | At Project Site |
| Presiding Officer | Joint Collector & Additional District Magistrate |
| Major issues raised | Pollution, Greenbelt development, Employment, Drinking water supply, Health checkup, Rain Harvesting structure |

28.5.13 The following are the issues raised during PH & commitment of the Project Proponent.

| S.No. | Issue raised | Management Response | Target Date for implementation of action plan | Budgetary allocation |
|-------|-------------------|---|---|---|
| 1. | Pollution Problem | <ul style="list-style-type: none"> It is a green field project. In the proposed project, Air Pollution Control System (APCS) such as 4th Hole extraction system with Bagfilters (PTFE type), covered conveyers, dust suppression system, internal roads will be provided and operated to ensure compliance with APPCB norms. Interlocking system will be provided in such a manner that whenever the Particulate Matter emission exceeds the standard, the raw material feed to the furnace will be stopped and after rectification of APCS only, the production in the unit will resume. Continuous Emission Monitoring System (CEMS) will be connected PCB server. Zero Liquid Discharge (ZLD) will be maintained in the plant. All solid waste will be disposed in accordance with norms. 33% of the total area will be developed with greenbelt. The Net resultant Ground level concentrations during operation of the proposed project after superimposing the incremental concentrations over the maximum baseline concentrations are | By March 2023 | Rs. 2.0 Crores for Capital Cost of EMP and Rs.31.6 Lakhs for Recurring cost per annum for Env. Protection |

| S.No. | Issue raised | Management Response | Target Date for implementation of action plan | Budgetary allocation |
|-------|--|--|---|--|
| | | well within the National Ambient Air Quality Standards. | | |
| 2. | Employment | <ul style="list-style-type: none"> The proposed project will create employment to 100 people during construction and 50 people during operation of the project. Employment preference will be given to local villagers as per their qualification and experience in the proposed project and also as per Govt. of Andhra Pradesh Act, 75 % of total employment will be given to local people only. | --- | --- |
| 3. | Postponement of the Public Hearing due COVID-19 pandemic | Public Hearing has been conducted by Andhra Pradesh Pollution Control Board (APPCB) in accordance with the COVID-19 guidelines issued by Govt of India and in accordance with the provisions of EIA Notification, 2006 and its subsequent amendments thereof | --- | --- |
| 4. | Greenbelt development details | <ul style="list-style-type: none"> Greenbelt will be developed in 33% of total area i.e. 0.53 Ha. (1.32 acres) in the plant premises. Local and native species will be planted with a density of 2500 trees per hectare. | By Sept. 2023 | Rs. 5.0 Lakhs for Capital Cost and Rs.3.0 Lakhs for Recurring cost for Greenbelt development |
| 5. | Social & Infrastructure Development activities | Management has stated that various socio-economic activities will be carried out with budget allocation as per MoEF&CC norms in consultation with the village panchayat. | By March 2023 | Rs. 30.5 Lakhs allocated for Socio economic activities |
| 6. | Health check up | Health checkup will be carried out periodically in surrounding villages | Once in every year | Rs.3.0 Lakhs / Year (under CSR as per Companies Act 2014) |
| 7. | Rain Harvesting Structure | Rain water harvesting structures will be provided in the plant premises. Ground water table & water quality will be monitored periodically | By March 2023 | Rs. 5.0 Lakhs |

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

| S.No. | Physical activity and action plan | Budget Allocated (Rs. In Lakhs) | Target Date for implementation of action plan |
|----------|--|---------------------------------|---|
| <i>A</i> | <i>Based on Need Based & SIA Study</i> | | |
| 1 | Community & Infrastructure Development Programmes Providing LED Street lighting with solar panels in Mettavalasa village in consultation with Gram Panchayat | 6.0 | By March 2023 |
| | SUBTOTAL (A) | 6.0 | |
| <i>B</i> | <i>Based on Public Consultation / Hearing</i> | | |
| 1 | Contribution to Skill Development Programme such as Welding, Electrical, Computer Hardware, Soft skills like computer programs, Sewing Operator, etc. in Mettavalasa Village | 10.0 | By Dec. 2022 |
| 2 | Construction of Toilets in the Mettavalasa village (2 nos. @ Rs 2.5 lakhs | 5.0 | By March 2023 |

| | | | |
|---|--|-------------|---------------|
| | / toilet) | | |
| 3 | Plantation in Mettavalasa village | 1.5 | By March 2023 |
| 4 | Rain Water Harvesting Structures in consultation with Mettavalasa village Gram Panchayat | 5.0 | By March 2023 |
| 5 | RO Water Plant (1 no.) in M. Panukuvalasa Village | 3.0 | By March 2022 |
| | SUBTOTAL (B) | 24.5 | |
| | TOTAL (A + B) | 30.5 | |

Note: Periodic Health Checkup issues have been raised in public hearing and will be carried out in Mettavalasa village in consultation with Gram Panchayat. It will be covered under CSR as per Companies Act 2014. (Rs. 3.0 Lakhs/year is allocated)

28.5.15 The capital cost of the project is Rs. 8.33 Crores and the capital cost for environmental protection measures is proposed as Rs.2.305 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 31.6 lakhs/annum. The employment generation is 50 people during operation of the proposed project and 100 people during construction of the proposed units. The details of cost for environmental protection measures is as follows:

| S.No. | Item | Capital Cost (Rs.in Lakhs) | Recurring Cost / Annum (Rs.in Lakhs) |
|--------------|---|----------------------------|--------------------------------------|
| 1. | Air Emission Management | | |
| | • 4 th hole Extraction systems with Bag filters | 65.0 | 10.0 |
| | • Chimney | 25.0 | --- |
| | • Water Sprinklers | 5.0 | 0.1 |
| 2. | Wastewater Management | | |
| | • ETP (General) | 5.0 | 1.0 |
| 3. | Solid waste Management | | |
| | • Slag Disposal | 10.0 | --- |
| | • Fe-Cr recovery & its disposal | 10.0 | 5.0 |
| | • Municipal solid waste storage & disposal | --- | 2.0 |
| | • Briquetting Plant | 20.0 | --- |
| 4. | Greenbelt development & RWH | 10.0 | 3.0 |
| 5. | Environmental Monitoring | | |
| | • AAQMS | 35.0 | 6.0 |
| | • CEMS | 5.0 | |
| 6. | Occupational Health & Safety | 10.0 | 4.5 |
| 7. | Budget for Social & Infrastructure Development activities (Socio economic activities) | 30.5 | --- |
| TOTAL | | 230.5 | 31.6 |

28.5.16 Greenbelt will be developed in 0.53 ha which is about 33% of the total project area. A 10 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 1325 saplings will be planted and nurtured in 0.53 hectares in 2 years.

28.5.17 The proponent has mentioned that there are no court cases or violation under EIA Notification to the project or related activity.

28.5.18 Name of the EIA Consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S.No.129 in the List of ACOs and NABET certificate vide no. NABET/EIA/1922/RA0149 valid till 22-03-2022.

Observations of the Committee

28.5.19 The Committee noted the following:

- i. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards.
- ii. The Committee also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues in the study area and the issues raised during the public hearing. The certified compliance report of WBPCB is also found to be satisfactory.
- iii. Additional information submitted by the project proponent found to be satisfactory, and addressing the concerns of the Committee.

Recommendations of the Committee

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

A. Specific conditions

- i. No ground water abstraction shall be permitted.
- ii. PM emissions from stacks shall not exceed 30 mg/Nm³.
- iii. 4th hole extraction shall be provided on SAF.
- iv. Jigging and briquetting plant shall be installed.
- v. FeCr slag shall be used for construction work only after TCLP test failing which the slag shall be transported to TSDF.
- vi. Treated waste water shall be reused and recycled.
- vii. All roads in the plant shall be paved and industrial vacuum cleaners shall be used regularly to clean roads to reduce fugitive emissions .
- viii. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression.
- ix. Shall Use Energy Efficient Motors as per NEMA Premium® Efficiency Electric Motor specification or equivalent classifications with VFD for control.
- x. 100% plantation to be completed by 2021.
- xi. Plant CEMS monitoring station shall be in the plant control room and shall be integrated with plant alarm and ESD system. This shall be ISA compliant raising first Hi Alarm at 80% of emission limit, second alarm (HI-HI) at 90%, before taking to safe operating

condition at 100% limit. All sensors shall be regularly calibrated and shall have the valid calibration certificate.

- xii. 75% employment shall be given to locals as per AP Government Rules.

B. General conditions

I. Statutory compliance:

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

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- v. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- vi. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
- vii. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
- viii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
- ix. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- x. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. Adhere to 'Zero Liquid Discharge'.
- iv. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- v. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- vi. The project proponent shall practice rainwater harvesting to maximum possible extent.

IV. Noise monitoring and prevention

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

V. Energy Conservation measures

- i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

VI. Waste management

- i. Used refractories shall be recycled as far as possible.
- ii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

- i. Green belt shall be developed in an area equal to 33% of the plant area with native tree species in accordance with CPCB guidelines. The greenbelt shall *inter alia* cover the entire periphery of the plant
- ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

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

IX. Corporate Environment Responsibility

- i. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- ii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

28.6 Expansion of Integrated Steel Plant from 0.067 to 0.378 MTPA at Unit-II Budhakata, Biringatoli, **District Sundargarh, Odisha** by **M/s Scan Steels Limited** [Online Proposal No. IA/OR/IND/182970/2020; File No. J-11011/97/2008-IA-II(I)] – **Extension of validity of Environment Clearance** – regarding.

28.6.1 M/s. Scan Steels Limited has made online application vide proposal no. IA/OR/IND/182970/2020 dated 26/12/2020 along with Form 6 and sought extension of validity of Environment Clearance accorded by the Ministry vide letter no. J-11011/97/2008-IA.II(I) dated 02/01/2014.

Details submitted by the project proponent

28.6.2 M/s. Scan Steels Limited was granted Environment Clearance by the Ministry vide letter No. J-11011/97/2008-IA. II(I) dated 02/01/2014 for a project titled “Expansion of Integrated Steel Plant from 0.067 to 0.378 MTPA at Unit-II Budhakata, Biringatoli, District Sundargarh, Odisha.”

28.6.3 With respect to the aforesaid EC, PP could implement only Coal Washery, Iron Ore Crusher & Fly Ash Brick Plant. The remaining units envisaged under the said EC could not be completed within the validity period of the EC due to various unforeseen reasons viz., fluctuating market prices and unstable Forex. PP has further submitted that they could not start the project due to non-sanction of requisite loan from lending agencies.

28.6.4 The implementation status of the EC dated 02/01/2014 is as follows:

| Sl. No. | Facilities | Units | As per EC dated 02/01/2014 | Implementation Status | Consent (CTO w.r. to EC dated 01/01/2014) |
|---------|---------------------|-------|----------------------------|-----------------------|---|
| 1. | Blast Furnace | TPA | 122500 | Not Done | - |
| 2. | Iron Ore crusher | TPA | 300000 | Implemented | 300000 TPA |
| 3. | Captive Power Plant | MW | 38 | Not Done | - |
| 4. | SMS | TPA | 378040 | Not Done | - |
| 5. | Rolling Mill-1 | TPA | 200000 | Not Done | - |

| | | | | | |
|-----|-----------------------|-----------------------|-------------------|---|------------|
| 6. | Rolling Mill-2 | TPA | 200000 | Not Done | - |
| 7. | Silico manganese | TPA | 10200 | Not Done | - |
| 8. | DRI Plant | TPA | 432000 | Not Done | -- |
| 9. | Coal Washery | TPA | 240000 | Implemented | 240000 TPA |
| 10. | Iron Ore Pellet Plant | TPA | 1200000 | Not Done | - |
| 11. | Galvanizing Plant | TPA | 108000 | Not Done | - |
| 12. | Fly Ash Bricks Unit | TPA | 4x42 TPD=50400 | 1x42 TPD Done 2x42 TPD Work in progress | 12600 TPA |
| 13. | Oxygen Plant | Nm ³ /year | 622 | Not Done | - |

28.6.5 Implementation schedule for the unimplemented units is given as below:

| Sl. No. | Facilities | Units | As per EC dated 02/01/2014 | Implementation schedule |
|---------|-----------------------|-----------------------|--|----------------------------------|
| 1. | Blast Furnace | TPA | 122500 | Feb 2022- Dec 2023 |
| 2. | Captive Power Plant | MW | 38 | Sep 2021- Jan 2024 |
| 3. | SMS | TPA | 378040 | June 2022-Nov 2023 |
| 4. | Rolling Mill-1 | TPA | 200000 | Apr 2022-Dec 2023 |
| 5. | Rolling Mill-2 | TPA | 200000 | Sep 2022-Dec 2023 |
| 6. | Silico manganese | TPA | 10200 | Jun 2022-Dec 2023 |
| 7. | DRI Plant | TPA | 432000 | Oct 2021-Oct 2023 |
| 8. | Iron Ore Pellet Plant | TPA | 1200000 | Feb 2022-Oct 2023 |
| 9. | Galvanizing Plant | TPA | 108000 | Nov 2022- Nov 2023 |
| 10. | Fly Ash Bricks Unit | TPA | 2x42 TPD (Work in progress) 1x42 TPD | Work in progress Dec 2022 |
| 11. | Oxygen Plant | Nm ³ /year | 622 | Jan 2023- Dec 2023 |

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

Observations of the Committee

28.6.7 The Committee noted that part of facilities envisaged under the EC dated 02/01/2014 could not be implemented within the EC validity period due to delay in obtaining bank loan, fluctuating market prices and unstable Forex. Further, the Committee also looked into satisfied with the implementation schedule submitted by the project proponent.

Recommendations of the Committee

28.6.8 In view of the foregoing and after deliberations, the Committee recommended to extend the validity of the Environment Clearance for a period of three years beyond 01/01/2021, i.e., from 02/01/2021 to 01/01/2024 subject to the environmental safeguards prescribed in the EC dated 02/01/2014.

19th January, 2021

28.7 Proposed Expansion of Aluminium Smelter Production Capacity (from 16 LTPA to 18 LTPA), CPP (1215 MW) by adding 2 LTPA Smelter Plant by **M/s. Vedanta Limited** at Bhurkamunda Village, Kalimandir P.O, **Jharsuguda District, Odisha** [Online Proposal No. IA/OR/IND/185460/2007; File No. J-11011/29/2007-IA II(I)] – **Environment Clearance** – regarding.

28.7.1 M/s. Vedanta Limited has made an online application vide proposal no IA/OR/IND/185460/2007 dated 29/12/2020 along with copy of EIA/EMP report and Form-2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Schedule No. 3 (a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at the Central level.

Details submitted by Project proponent

28.7.2 The detail of the ToR is furnished as below:

| Date of Application | Consideration | Details | Date of Accord |
|----------------------------|---|--------------------|-----------------------|
| 03/11/2017 | 26 th meeting of EAC held during 11 th -13 th December, 2017 | Terms of Reference | 20/12/2017 |

28.7.3 The project of M/s. Vedanta Limited located at Bhurkamunda village in Jharsuguda tehsil & district, Odisha is for expansion of Aluminium smelter capacity (from 16 LTPA to 18 LTPA); CPP (1215 MW) by adding 2 LTPA smelter plant. Vedanta Limited Jharsuguda also proposes for expansion of its township in an area of 36.826 ha, in its existing own area.

28.7.4 Environmental site settings

| S.No. | Particulars | Details | Remarks |
|--------------|--|--|---------------------------|
| i. | Total land | 834.236 ha [Already possession of the proponent at Jharsuguda] | Land use: Industrial land |
| ii. | Land acquisition details as per MoEF&CC O.M. dated 7/10/2014 | Not applicable | Not applicable |
| iii. | Existence of habitation & involvement of R&R, if any. | Not applicable | Not applicable |
| iv. | Latitude and Longitude of the project site | Smelter Plant: Latitude: 21°48' 47" N Longitude: 84°02' 45" E Township: Latitude: 21°49' 26.8" N | - |

| S.No. | Particulars | Details | Remarks |
|-------|--|--|--|
| | | Longitude: 84°01' 45.1'' E | |
| v. | Elevation of the project site | Smelter plant: 198-216 m | |
| vi | Involvement of Forest land if any. | No forest land involved in proposed project | -- |
| vii. | Water body exists within the project site as well as study area | Project site: Kharkhari Nala (passes in between along the boundary of smelter-1 and smelter-2) Study area: Bheden river (0.3 km, S) Ib river (7.6 km, W) Hirakud reservoir (7.8 km, S) | From Hydro-geological report- HFL-192.5 m above mean sea level |
| viii. | Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area | Nil within 10 km radius | Not applicable |

28.7.5 The existing project was accorded environmental clearance (latest) vide Letter.no. F. No. J-11011/29/2007-IA-II (I) dated 11/06/2008. Consent to Establish vide Letter no.7723/Ind-II-NOC-4870 dated 18/05/2009. Consent to Operate for the existing unit was accorded by Odisha State pollution Control Board vide Letter no. 3994/IND-I-CON-6079 dated 27/03/2020. The validity of CTO is up to 31/03/2021. CTO for existing Township complex has been granted by SPCB, Odisha vide Letter No: 2684/IND-I-CON-ULB-122 dated 15/03/2019 and is valid up to 31/03/2024.

28.7.6 Implementation status of the existing EC:

| Sl. No. | Facilities | Units | As per EC F. No. J-11011/29/2007-IA-II (I) dated 11.06.2008. | Implementation Status as on 12.01.2021 | Production as per CTO |
|---------|------------|-------|--|--|-----------------------|
| 1 | Smelter | LTPA | 16 | 16 | 16 |
| 2 | CPP | MW | 1350 | 1215 | 1215 |

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

| Sl. No. | Name | Existing Units | | Proposed Units | | Total (Existing + Proposed) | |
|---------|---------|----------------|------------|----------------|------------|-----------------------------|------------|
| | | Configuration | Production | Configuration | Production | Configuration | Production |
| 1 | Smelter | 16 LTPA | 16 LTPA | 2 LTPA | 2 LTPA | 18 LTPA | 18 LTPA |

| | | | | | | | |
|---|-----|---------|---------|---|---|---------|---------|
| 2 | CPP | 1215 MW | 1215 MW | - | - | 1215 MW | 1215 MW |
|---|-----|---------|---------|---|---|---------|---------|

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

| Sl. No. | Description | Quantity Existing (TPA) | Additional Quantity Proposed (TPA) | Source & Distance from site (kms) | Mode of Transport |
|---------|--|-------------------------|------------------------------------|---|-------------------|
| 1 | Alumina | 30,88,000 | 3,86,000 | 1. Captive- Lanjigarh refinery (Major)-311 km, 2. Domestic- Utkal Alumina -483 km 3. Import -Kakinada port-715 km (from port to site) | Rail - BTAP wagon |
| 2 | Cryolite | 3,200 | 400 | 1. Domestic 2. Import through via Vishakapatnam-564 km (from port to site) | Rail containers |
| 3 | Calcined petroleum coke | 5,93,600 | 74,000 | 1. Domestic –Rain Calciner, Sanbhera etc, Vishakapatnam: 564 km 2. Import via Vishakapatnam-564 km (from port to site) | Rail wagons |
| 4 | Coal tar pitch | 1,28,000 | 16,000 | Domestic: Sambalpur -60 km | Trucks |
| 5 | Aluminum fluoride | 32,000 | 4,000 | 1. Domestic: 564 km 2. Import through via Vishakapatnam port: 564 km | Trucks |
| 6 | Fuel requirement: Heavy Fuel Oil (HFO) | 84,263 KLPA | 5,060 KLPA | Domestic: Vishakapatnam-800 km –By road Raipur & Haldia-350 km | Trucks |

28.7.9 The water requirement of the proposed expansion project is estimated as 576 KLD which will be completely recycled after treatment. No additional water will be required. It will be sourced from present allocation from Hirakud reservoir. The water requirement of the proposed township expansion is 800 KLD which will be met through present allocation from Hirakud reservoir and hence no additional allocation of water is required for proposed expansion. The permission for drawl of surface water is obtained from Water Resource Department vide letter no. IRR.II-WRC/157/13-26079 dated 01.10.2019 & II R.II-WRC/3843 dated 13.02.2014.

28.7.10 The power requirement of the proposed smelter plant expansion is about 400 MW. The additional power requirement will be met from existing Power Plant, State Grid or group

captive model. The power requirement for proposed expansion of township is estimated as 7 MVA which will be sourced existing TPP.

28.7.11 Baseline Environmental Studies:

| | |
|--------------------------------------|---|
| Period | 1 st December, 2017 to 28 th February, 2018 |
| AAQ parameters at 9 locations | PM _{2.5} = 11.3-26.4 µg/m ³ PM ₁₀ = 27.1-63.5 µg/m ³ SO ₂ = 8.6-25.0 µg/m ³ NO _x = 10.4-27.1 µg/m ³ CO = 151-360 µg/m ³ |
| AAQ modelling | PM ₁₀ = 0.11 µg/m ³ SO ₂ = 3.0 µg/m ³ NO _x = 1.1 µg/m ³ |
| Ground water quality at 8 locations | pH: 6.7 - 7.4, Total Hardness: 91 -241 mg/l, Chlorides: 18.6-64.5 mg/l, Fluoride: 0.2 -0.5 mg/l. Heavy metals are within the limits. |
| Surface water quality at 8 locations | pH: 6.8 to 8.1; DO: 4.9 to 5.8 mg/l and BOD: <3 mg/l. COD : <5 to 10 mg/l |
| Noise levels | 37.9 -59.2 dB(A) for the day time and 35-56 dB(A) for the Night time. |
| Traffic assessment study findings | Additional truck traffic due to existing & proposed project: 36 Trucks per day Incremental concentrations of PM, CO, NO₂ and HC: CO: 13.80 µg/m ³ NO ₂ : 0.50 µg/m ³ PM: 0.03 µg/m ³ HC: 0.97 µg/m ³ |
| Flora and fauna | The project site is not located in any eco-sensitive area. There are no national parks, wildlife sanctuaries, biosphere reserves, elephant / tiger reserves or Important Bird Areas (IBAs) or Ramsar Wetlands. There are no Schedule-I Fauna in the core plant area. Peacock, Common Indian Monitor and Python are the only Schedule-I species reported / recorded from the study area. PP has further stated that though Peacock is Schedule I, does not belong to the RET category of the IUCN. If allowed to domesticate, it is easy to multiply them. Further, they are not threatened by poaching since it attracts severe punishment. If any Schedule-I species is found in the core area at any time, the EHS division will immediately alert the forest and wildlife department and assist them in rescue operations. Hence, the conservation of Schedule-I species is beyond the legal jurisdiction of the Vedanta Aluminium company. However, the company is ready to extend full support and cooperation to the wildlife authorities. |

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

| Sl. No | Name of the Residue / Waste | Source | Existing Plant Generation (per annum) | Proposed Expansion Generation (per annum) | Total after Expansion Generation (per annum) | Current Disposal Strategy |
|--------|-----------------------------|---------------------------|---------------------------------------|---|--|---|
| 1 | Used oil/Spent oil | From machinery/equipment | 530 KL | 34 KL | 564 KL | Authorized recyclers |
| 2 | ETP sludge | ETP | 520 T | 65 T | 585 T | SLF/ TSDF |
| 3 | Anode butt | From electrolytic process | 3,00,000 T | 37,500 T | 3,37,500 T | Internally recycled / Authorized recyclers |
| 4 | Spent pot lining | From reduction cells | 40,000 T | 5,000 T | 45,000 T | To authorized re-processors |
| 5 | Dross | From cast house | 35,000 T | 4,375 T | 39,375 T | Authorized re-processors / internal processing/ recycling |

28.7.13 Public Consultation:

| | |
|--------------------------------|---|
| Details of Advertisement given | 28 th August 2020 |
| Date of Public Consultation | 30 th September 2020 |
| Venue | Govt. upper primary school at Kurebaga, Dalki, Jharsuguda |
| Presiding Officer | Additional District Magistrate |
| Major Issues Raised | Emission of gas & fumes problem, Compensation for crop damage due to emission of gases, employment etc. |

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

| Sr. No. | Issues Raised During Public | Response of the Project Proponent | Action Plan |
|---------|---------------------------------|---|---|
| 1 | Emission of gas & fumes problem | Both of the smelters and power plants of M/s. Vedanta Ltd. have state-of-the-art infrastructure and pollution control equipment. Vedanta Jharsuguda's power plant is the first in India, to implement hybrid ESP. State of the art fume treatment plants are installed in the smelter units for emission control. Vedanta company's vision is zero harm, zero waste and zero discharge. Vedanta Ltd. is complying with stipulated norms by regulatory bodies like SPCB, CPCB & MoEF&CC. | The project proponent has further submitted Action Plan with Timeline and Budget to address the |

| Sr. No. | Issues Raised During Public | Response of the Project Proponent | Action Plan |
|---------|---|---|--|
| | | Vedanta Ltd have online continuous emission monitoring systems in place which are monitored by State and Central Pollution Control Board. Vedanta Ltd will be complying with the state and central norms in the proposed expansion project also. | issues raised during public hearing. With respect to |
| 2 | Compensation for crop damage due to emission of gases | In 2018-19, as per the instruction of District Administration, Central Rice Research Institute (CRRI), Cuttack was engaged to conduct a survey. The results of their survey clarified that there was no direct connection between crop damage and Vedanta Limited. They have also invited again to survey, discuss and recommend actions which can help the farming community to avert such crop losses. Vedanta Ltd. are placing orders with CRRI, which is slightly getting delayed due to COVID. Unit have plans to get this survey started within next 2-3 months. | employment, PP has submitted that the direct & indirect employment for the proposed expansion will be around 800. |
| 3 | Road dust problem due to transport of ash | In the proposed expansion, Vedanta Limited is not proposing expansion of power generation. | Further it will benefit 4000 to 5000 people through various other |
| 4 | Avenue plantation and other afforestation | Avenue plantation & other afforestation is being carried out within the plant premises and outside the plant premises as a part of community development programs. The same will be continued. | engagements. Vedanta |
| 5 | Formation of Environmental Committee to address issues related to environment | Vedanta Limited will consult with SPCB and District Administration for formation of a separate committee and follow their advice on this matter. | Limited, will continue to be compliant with all employment-related rules, regulations laid down by the |
| 6 | Employment for local affected people | The proposed expansion will be taken up within the factory premises and existing land under possession of Vedanta Limited. There is no land acquisition in proposed expansion project, hence no land oustee for the project. Presently, Vedanta Limited, Jharsuguda is compliant with all employment-related rules, regulations laid down by the state and central governments. As on date nearly 5195 persons are employed from Jharsuguda. More than 90 % of our unskilled workforce is from Odisha. Vedanta Ltd. will continue to comply with all the statutory norms of state and central Govt on local employment. | state and central government and local employment will be given as per the eligibility in line with company policy. Further, Vedanta Ltd has |
| 7 | Contractual work to local people | Local contractors are being engaged suitably as per the Vedanta Limited policy and relevant Govt. guidelines and Vedanta Ltd. will suitably engage local contractor in future for the proposed expansion. | budgeted about Rs. 55 crores as a capital cost on |
| 8 | Training and skill development programme for local youth | At present skill development through livelihood activities are taken up by Vedanta ltd. through Subhalaxmi programme. Through initiatives, skill development is ongoing for local farmers and women entrepreneurs. Further, to help local youth of the peripheral communities who are unskilled to acquire desired skillsets, discussions will be undertaken with the state and central government's skill development department to have a structured program so that the local youths become self-reliant. | pollution control, treatment and monitoring systems in proposed expansion project. For the Compensation |

| Sr. No. | Issues Raised During Public | Response of the Project Proponent | Action Plan |
|---------------------------------------|--|--|--|
| 9 | Employment for unskilled & illiterate local people | Vedanta Ltd, Jharsuguda is compliant with all employment-related rules and regulations laid down by the state and central governments. More than 90% of Vedanta's unskilled workforces are from Odisha. Vedanta Ltd will comply with all the statutory norms of state and central Govt on local employment and will continue to focus on local employment. Through educational initiatives as a part of CSR, Vedanta Ltd will continue to support local students for their education to alleviate illiteracy. | for crop damage due to emission of gases, study through CRRRI will be carried out with a budget of Rs.49.5 lakhs and the study period will be for two years. |
| Issues Related to CSR Activity | | | |
| 10 | Supply of drinking water | Proper evaluation on the request to provide clean drinking water will be taken up as a part of CSR program wherever required | |
| 11 | Road & peripheral development | Vedanta Ltd. will take up it as a part of CSR activities as and when required | |
| 12 | Health and establishment of medical college and hospital | Vedanta Ltd. has been doing development of this area as per the rules & norms of government and the same will be continued. | |
| 13 | Education & establishment of English medium school | Vedanta Ltd. have been running education projects like DAV Scholarship, Vedanta Mini Science Centre and Vedanta Vidyarthi Vikas Yojana for students. They are also supporting various English and Odia medium schools for infrastructural development. Further, Vedanta Ltd. will take up 50 brown field Nandghar, enriching current Aganbadi Centers into Nandghar which will help in creating strong foundation for pre-education for children aged between 3 to 6 years. | |
| 14 | Provision of street light in the surrounding villages | Vedanta ltd. will take feasible action through CSR. | |
| 15 | Women empowerment | Vedanta has developed and nurtured a Flag ship program, Subhalaxmi Cooperative Society, meant towards woman empowerment and entrepreneurship with more than 4,000 women members. This is one of the largest women cooperative society in western Odisha. The same will be further expanded to a targeted 10,000 members in next 3-5 years. | |

28.7.14 The capital cost of the project is Rs. 1240 Crores and the capital cost for environmental protection measures for smelter plant is Rs. 55 Crores and annual recurring cost towards the environmental protection measures is proposed as Rs. 11 Crores. The capital cost of environmental protection measures of proposed township is Rs. 6.5 crores & recurring cost is Rs. 1.3 crores. The employment generation from the proposed expansion of smelter plant is estimated to be 800 (250-Direct & Indirect-550). The total approximate manpower of proposed township during construction is estimated as 200. The details of cost for environmental protection measures is as follows:

COST ESTIMATE FOR IMPLEMENTATION OF EMP FOR PROPOSED EXPANSION OF SMELTER PLANT

| Sr. No. | Particulars | Capital Investment (Rs in Crores) | Recurring Cost (Rs in Crores) |
|---------|-------------|-----------------------------------|-------------------------------|
|---------|-------------|-----------------------------------|-------------------------------|

| | | | |
|---|---|------|------|
| 1 | ETP (RO plant) and storm water management | 50.0 | 10.0 |
| 2 | Raw Water Treatment Plant | 5.0 | 1.0 |
| | Total | 55.0 | 11.0 |

**BUDGET ALLOCATION FOR ENVIRONMENTAL PROTECTION FOR
PROPOSED EXPANSION OF TOWNSHIP**

| Sr. No | Environmental Aspects | Capital cost (Rs. in Crores) | Recurring cost (Rs in Crores) |
|------------|------------------------|------------------------------|-------------------------------|
| 1 | STP | 3.0 | 0.6 |
| 2 | Solid waste management | 1.5 | 0.3 |
| 3 | Rain water harvesting | 1.5 | 0.3 |
| 4 | Greenbelt | 0.5 | 0.1 |
| Total Cost | | 6.5 | 1.3 |

28.7.15 Plantation will be developed in 51.45 ha in addition to present 226.62 ha including expansion of smelter plant & township which is about 33% of the total project area after expansion. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 120,000 saplings will be planted and nurtured in 51.45 ha in 5 years.

28.7.16 The proponent has reported that the Writ Petition W.P. (C) 24789 of 2020 (Subrat Bhoi and Anr vs State of Odisha and Ors.) was filed by Subrata Bhoi & others before the Hon'ble Orissa High Court on 24/09/2020 praying for deferring the public hearing scheduled on 30/09/2020 for the purpose of expansion of aluminium smelter from 16 LTPA to 18 LTPA. Matter came up for hearing and admission on 29/09/2020. The Court issued notice to the opposite parties and as an interim measure directed that the public hearing scheduled on 30/09/2020 not to take place till the next date of hearing. However, while passing the aforesaid interim order, the Hon'ble court was unaware of the order already passed by the Division bench of the Orissa High Court in WP(C) No. 24669 of 2020 allowing the public hearing. The matter was mentioned by Vedanta Limited on 30/09/2020 and the Hon'ble Court was apprised of the order dated 28/09/2020 passed in the aforesaid writ petition. Upon hearing the parties, the Hon'ble Court in partial modification of its order dated 29/09/2020 allowed the public hearing to continue as per the original schedule further stating that no final decision to be taken till next date of hearing. The matter was next listed on 01/10/2020 for final hearing wherein arguments from both sides were completed and final order was reserved. The final order was passed on 09/10/2020. The Hon'ble High Court of Odisha disposed of the case by asking the petitioners to make a representation before the Collector, Jharsuguda. The Collector, after considering the said representation, passed an order dated 18/10/2020 in this matter holding, inter-alia, that 'the hearing conducted on 30/09/2020 with regard to the proposed expansion of Aluminium Smelter at Bhurkamunda is considered smooth and complete'.

28.7.17 Name of the EIA consultant: M/s. Vimta Labs Limited [S.No. 135, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021].

28.7.18 Certified compliance report from Regional Office:

The status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar. vide Letter No: 101-405/EPE/1620 dated 24/12/2020 in the name of M/s. Vedanta Limited. The action taken report was submitted to Regional office MoEF&CC, Bhubaneswar vide letter no. VL/MoEF/06/2021-001 dated 05/01/2021. The details of the observations made by RO in the report dated 24/12/2020 along with its re-assessment / present status as furnished by the PP is given as below:

| Sr. No | Non-compliances / Partially Compliance details | Observation of RO (abridged) | Condition no | | | Re-assessment by RO / Response by PP |
|--------|---|--|--------------|----------|---------|---|
| | | | EC date | Specific | General | |
| 1. | Fluoride consumption shall be less than 10kg/T of aluminium produced as specified in the CREP guidelines. | PP to submit an action plan along-with time schedule for achieving the target of fluoride consumption below 10kg/T of aluminium produced, as per the CREP guidelines. The PP may contemplate on establishing/ installing having in-house facility for treatment and disposal of SPL. | 11/06/2008 | vi & xvi | - | The action taken report was submitted to Regional office MoEF&CC, Bhubaneswar vide letter no. VL/MoEF/06/2021-001 dated 05/01/2021. |
| 2. | As proposed, spent pot lining waste should also be provided to cement and steel industries for further utilisation. | The PP should prepare an Action Plan along with implementation schedule and submit the same regarding ways of using SPL generated in the plant including providing to Cement and Steel industries. | 11/06/2008 | ix | - | |

Observations of the Committee

28.7.19 The Committee noted the following:

- i. There is 2400 MW coal based running power plant at the site for which EC was accorded by the Ministry vide letter no. Ltr. No. J-13011/3/2007 IA II (T) dated 7/12/2007.
- ii. Cumulative impact assessment of all the units have not been carried out by the project proponent.
- iii. With respect to compliance status existing EC, following non-compliances have been observed and the same is yet to be complied by the project proponent.
 - a. Action Plan and time schedule to achieve the CREP target of Fluoride emission of 10 kg/t of Al has not been furnished.
 - b. Facility for treatment of Spent Pot Liners (SPL) not yet provided and supply of SPL to Cement and Steel plants has not started as yet.

- c. CREP Recommendations for Aluminium Sector have not been strictly followed.
- iv. Kharkhari Nala (passes in between along the boundary of smelter-1 and smelter-2). No details are made available in the EIA report regarding HFL of Kharkhari nala.
- v. There are three Schedule I species in the study area. Wild life conservation plan as per TOR point # 6 has not been prepared. Consultant by referring IUCN did try to mislead EAC.
- vi. The table for EMP activities, based on the issues raised in Public hearing is not available in the report. Skill development for self-employment not addressed. Responses to issues raised in PH are vague.
- vii. TOR compliance given in Annexure I of Volume II of the EIA report is not readable. It has not been scanned with clarity. All Annexures in the report are not readable and identifiable easily. There are 824 pages without any identifiability/traceability index. In EIA report all signatures are scanned.
- viii. Trends for Fluorine content in the Foray for past two years have not been furnished.
- ix. TOR point #9 has not been addressed adequately in chapter 10.
- x. Large area has been earmarked for Flyash disposal. It has not been planned as per Fly ash Handling and Management Rules 2009 of MoEF&CC.
- xi. Green belt details are not available in the documents submitted for EC.
- xii. No details about Secured Land Fill have been provided.
- xiii. There is no EC for existing township. Township expansion by 36.826 ha is proposed. As per the MoEF&CC O.M. dated 24/12/2010 regarding consideration of integrated and interlinked proposals, the EC for the township project has to be obtained. Sectoral EAC may not be able to appraise the township proposal although ToR was accorded for the same.
- xiv. Solid waste management plan has not been furnished.

Recommendations of the Committee

- 28.7.20 In view of the observations cited above and after detailed deliberations, the committee recommended to return the proposal in present form as consultant has drafted poor EIA.EMP report and intentionally tried to mislead the EAC.

The consultant was warned not to mislead the Committee and not try to do such things in future. In case of further occurrence of the same, action against the consultant would be recommended.

- 28.8 1.2 MTPA Integrated Steel Plant with 225 MW CPP- change in configuration, production capacity & product mix of the project- Reduction in Blast Furnace from 1.0 MTPA (2 x 550 m³) to 0.6 MTPA (1 x 550 m³), Sinter Plant from 1.0 Million TPA (1 x 175 m²) to 0.6 Million TPA (1 x 70 m²), Ferro Alloy Plant from 0.12 MTPA (10 x 9 MVA) to 0.048 MTPA (4 x 9 MVA) & CFBC (Coal Dolomite based CPP) 135 MW (3 x 45 MW) to 90 MW (2 x 45 MW) ; Expansion of DRI from 0.5 MTPA (2 x 500 + 2 x 350 TPD) to 0.744 MTPA (4 x 600 TPD) with DRI based WHRB from 54 MW to 68 MW making total capacity of CPP- 194 MW and change in product mix (production of DI fitting & accessories with DI Pipe) within EC approved capacity of Ductile Iron Pipe (0.2 Million TPA), keeping steel melting shop with CCM and oxygen optimized furnace, rolling mill, coke oven plant, oxygen plant, lime & dolomite plant, iron ore beneficiation with pellet plant & producer gas plant as it, by **M/s. Rashmi Alloy Steel Private Limited** located at Village-Gokulpur, P.O.-Shyamraipur, P.S.-Kharagpur (Local) **District – West Medinipur, West Bengal.** [Online Proposal No.

IA/WB/IND/186724/2020; File No. J-11011/169/2017-IA.II(I)] - **Environment Clearance under para 7(ii) of EIA Notification 2006** – regarding.

28.8.1 M/s Rashmi Alloy Steel Private Limited has made an online application vide proposal no. IA/WB/IND/166364/2020 dated 22/12/2020 along with copy of addendum EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project. The proposed project activity is listed at schedule no 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the Project proponent

28.8.2 The project of M/s Rashmi Alloy Steel Private Limited located at Mouza- Nandarchalk (J.L. No.-124), Bargai (J.L. NO-197) & Kanjarichak (J.L. No-125), village – Gokulpur, P.O.- Shyamraipur, P.S. – Kharagpur (Local) District - West Medinipur, West Bengal is for **1.2 Million Ton per Annum Integrated Steel Plant with CPP-** change in configuration, production capacity & product mix of the project- Reduction in Blast Furnace from 1.0 MTPA (2 x 550 m³) to 0.6 MTPA (1 x 550 m³), Sinter Plant from 1.0 Million TPA (1 x 175 m²) to 0.6 Million TPA(1 x 70 m²), Ferro Alloy Plant from 0.12 MTPA (10 x 9 MVA) to 0.048 MTPA (4 x 9 MVA) & CFBC (Coal Dolochar based CPP)135 MW (3 x 45 MW) to 90 MW (2 x 45 MW) ; Expansion of DRI from 0.5 MTPA (2 x 500 + 2 x 350 TPD) to 0.744 MTPA (4 x 600 TPD) with DRI based WHRB from 54 MW to 68 MW making total capacity of CPP- 194 MW and change in product mix (production of DI fitting & accessories with DI Pipe) within EC approved capacity of Ductile Iron Pipe (0.2 Million TPA), keeping steel melting shop with CCM and oxygen optimized furnace, rolling mill, coke oven plant, oxygen plant, lime & dolomite plant, iron ore beneficiation with pellet plant & producer gas plant as it.

28.8.3 Environmental site settings

| S.NO. | Particulars | Details | | | | | | | | | | | | | | |
|---------------|---|---|----------|-----------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| i. | Total land | The total land required for the project is 125.45 ha which vacant land is. No forest land involved. | | | | | | | | | | | | | | |
| ii. | Land acquisition details as per MoEF&CC O.M. dated 7/10/2014 | 100% land is under the possession of project proponent. | | | | | | | | | | | | | | |
| iii. | Existence of habitation & involvement of R&R, if any. | No rehabilitation and resettlement is involved for the subject project. | | | | | | | | | | | | | | |
| iv. | Latitude and Longitude of the project site | <table border="1"> <thead> <tr> <th>Latitude</th> <th>Longitude</th> </tr> </thead> <tbody> <tr> <td>22°21'39.93"N</td> <td>87°17'57.63"E</td> </tr> <tr> <td>22°22'05.60"N</td> <td>87°17'48.71"E</td> </tr> <tr> <td>22°22'14.07"N</td> <td>87°18'11.67"E</td> </tr> <tr> <td>22°22'08.35"N</td> <td>87°18'29.62"E</td> </tr> <tr> <td>22°21'40.33"N</td> <td>87°18'29.19"E</td> </tr> <tr> <td>22°21'38.26"N</td> <td>87°18'12.82"E</td> </tr> </tbody> </table> | Latitude | Longitude | 22°21'39.93"N | 87°17'57.63"E | 22°22'05.60"N | 87°17'48.71"E | 22°22'14.07"N | 87°18'11.67"E | 22°22'08.35"N | 87°18'29.62"E | 22°21'40.33"N | 87°18'29.19"E | 22°21'38.26"N | 87°18'12.82"E |
| Latitude | Longitude | | | | | | | | | | | | | | | |
| 22°21'39.93"N | 87°17'57.63"E | | | | | | | | | | | | | | | |
| 22°22'05.60"N | 87°17'48.71"E | | | | | | | | | | | | | | | |
| 22°22'14.07"N | 87°18'11.67"E | | | | | | | | | | | | | | | |
| 22°22'08.35"N | 87°18'29.62"E | | | | | | | | | | | | | | | |
| 22°21'40.33"N | 87°18'29.19"E | | | | | | | | | | | | | | | |
| 22°21'38.26"N | 87°18'12.82"E | | | | | | | | | | | | | | | |
| v. | Elevation of the project site | 33.5 M AMSL | | | | | | | | | | | | | | |
| vi. | Involvement of Forest land if any. | No forest land involved. | | | | | | | | | | | | | | |
| vii. | Water body exists within the project site as well as study area | Study Area Kangsabati River (4.5 Km North West) | | | | | | | | | | | | | | |
| viii. | Existence of ESZ/ ESA/ national | No ESZ/ ESA/ national park/wildlife | | | | | | | | | | | | | | |

| S.NO. | Particulars | Details |
|-------|--|--|
| | park/wildlife sanctuary/biosphere reserve/tiger reserve /elephant reserve etc. if any within the study area. | sanctuary / biosphere reserve/ tiger reserve /elephant reserve within 10 Km. |

28.8.4 The existing project was accorded environmental clearance in favour of M/s Orissa Metaliks Private Limited (OMPL) vide File No. - J-11011/169/2017-IA-(II), dated 03/04/2019 which was transferred to M/s Rashmi Alloy Steel Private Limited (RASPL) vide File No. - J-11011/169/2017-IA-(II), dated 28/01/2020. Under Clause 7 (ii) b of EIA Notification, 2006 configuration of 2 x 1.2 MTPA pellet is changed to 1 x 2.4 MTPA and intimation made to MOEF&CC, New Delhi vide letter RASPL/EC-Amendment/Config./20-21/01 dated 28/11/2020. Consent to Operate for 02 x 9 MVA Ferro Alloy Plant accorded by WBPCB vide Co-No-128946 dated 29/05/2020. The validity of CTO is up to 31/07/2024.

28.8.5 Implementation status of the existing Environmental Clearances.

| Sl. No. | Units | As per EC dated 03.04.2019 & 28.01.2020 & intimation under clause 7(ii) b dated 28.11.2020 | | Implementation Status as on Dec 2020 | Production as per CTO |
|---------|---|--|-----------|--|-----------------------|
| | | Configuration | Capacity | | |
| 1 | Blast Furnace | 2x550 m ³ | 1.0 MTPA | Not Yet Implemented | ** |
| 2 | Sinter | 1x175 m ² | 1.0 MTPA | Not Yet Implemented | ** |
| 3 | DRI | 2x500 TPD + 2x350 TPD | 0.5 MTPA | 2 x 500 TPD DRI Civil foundation completed and mounting of kiln, machineries going on. For 2 x 350 TPD DRI kiln civil foundation works going on. | ** |
| 4 | SMS with LRF,CCM and oxygen optimized furnace | 10 x 20 T EIF + 2 x 50 T EAF | 1.0 MTPA | Not yet Implemented | ** |
| 5 | Ferro Alloy Plant | 10 x 9 MVA | 0.12 MTPA | 2 x 9 MVA under operation | 24,000 TPA |
| 6 | Fe-Cr Briquette Manufacturing plant | 1x40 TPH | 40 TPH | Not yet Implemented | ** |
| 7 | Non-recovery type Coke Oven Plant | 2 x 0.25 MTPA | 0.5 MTPA | Not yet Implemented | ** |
| 8 | Lime Dolomite Plant | 1x200 TPD | 200 TPD | Not yet Implemented | ** |
| 9 | Oxygen Plant | 1x200 TPD | 200 TPD | Not yet Implemented | ** |
| 10 | Hot Rolling Mill | ** | 0.6 MTPA | Not yet Implemented | ** |
| 11 | Cold Rolling Plant with | *** | 0.35 MTPA | Not yet Implemented | ** |

| Sl. No. | Units | As per EC dated 03.04.2019 & 28.01.2020 & intimation under clause 7(ii) b dated 28.11.2020 | | Implementation Status as on Dec 2020 | Production as per CTO |
|---------|---|--|----------|--|-----------------------|
| | | Configuration | Capacity | | |
| | Pickling Line & Continuous Galvanizing | | | | |
| 12 | Ductile Iron Pipe Unit, Fitting & Accessories | ** | 0.2 MTPA | Under Construction | ** |
| 13 | Captive Power Plant | WHRB Based 90 MW (54 MW from DRI Plant+ 34 MW from Coke Oven Plant + 2 MW from EAF + CFBC) Coal & Dolochar Mix based 3 x 45 MW | 225 MW | WHRB (DRI) under Construction | ** |
| 14 | Pellet Plant | 1 x 2.4 MTPA | 2.4 MTPA | Civil works and structure erection going on. | ** |
| 15 | I/O Beneficiation Plant | 2 x 1.2 MTPA | 2.4 MTPA | Civil works going on. | ** |
| 16 | Producer Gas Plant | 20 x 7,500 Nm ³ /hr | 1,50,000 | Not Yet Implemented | ** |

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

| Sl. No. | Units | As per EC dt-03.04.19 & 28.01.20 | | Amendment under clause 7 (ii) b of EIA Notification | Proposed change | | Total (Existing + Proposed) | | |
|---------|-----------------------------|----------------------------------|------------|---|---|----------------|------------------------------|------------|----------------------|
| | | Configuration | Production | | Configuration | Production | Configuration | Production | Product |
| 1 | Blast Furnace | 2 x 550 m ³ | 1.0 MTPA | ** | Surrender 1 module of MBF | (-) 0.40 MTPA | 1 x 550 m ³ | 0.60 MTPA | Hot Metal / Pig Iron |
| 2 | Sinter | 1 x 175 m ² | 1.0 MTPA | ** | Scaling down the sinter capacity | (-) 0.40 MTPA | 1 x 70 m ² | 0.60 MTPA | Sinter |
| 3 | DRI | 2 x 500 TPD + 2 x 350 TPD | 0.5 MTPA | ** | Changing configuration and raw material mix | (+) 0.244 MTPA | 4 x 600 TPD | 0.744 MTPA | Sponge Iron |
| 4 | SMS with LRF,CCM and oxygen | 10 x 20 T EIF + 2 x 50 T EAF | 1.0 MTPA | ** | No change | | 10 x 20 T EIF + 2 x 50 T EAF | 1.0 MTPA | Billets |

| Sl. No. | Units | As per EC dt-03.04.19 & 28.0120 | | Amendment under clause 7 (ii) b of EIA Notification | Proposed change | | Total (Existing + Proposed) | | |
|---------|--|--|------------|---|--|----------------------------------|---|------------|---|
| | | Configuration | Production | | Configuration | Production | Configuration | Production | Product |
| | optimized furnace | | | | | | | | |
| 5 | Ferro Alloy Plant | 10 x 9 MVA | 0.12 MTPA | ** | Surrendering 6 no of SAF | (-) 0.072 MTPA | 4 x 9 MVA | 0.048 MTPA | Ferro Alloys |
| 6 | Cr Briquette Manufacturing plant | 1 x 40 TPH | 40 TPH | ** | No change | | 1 x 40 TPH | 40 TPH | Cr Briquette |
| 7 | Non-recovery type Coke Oven Plant | 2 x 0.25 MTPA | 0.5 MTPA | ** | No change | | 2 x 0.25 MTPA | 0.5 MTPA | Coke |
| 8 | Lime Dolomite Plant | 1 x 200 TPD | 200 TPD | ** | No change | | 1 x 200 TPD | 200 TPD | Lime & Dolomite |
| 9 | Oxygen Plant | 1 x 200 TPD | 200 TPD | ** | No change | | 1 x 200 TPD | 200 TPD | Oxygen |
| 10 | Hot Rolling Mill | ** | 0.6 MTPA | ** | No change | | ** | 0.6 MTPA | H.R. Coils, Plates (Checkered or Flat)/ TMT Bar, Wire Rod & Wire/ Structural long product like- Angel, Channel & Beam |
| 11 | Cold Rolling Plant with Pickling Line & Continuous Galvanizing | *** | 0.35 MTPA | ** | No change | | *** | 0.35 MTPA | Galvanized Sheet/ Plate / Coils, Flat Sheet/ Checkered Sheet, Strip & Nail |
| 12 | Ductile Iron Pipe Unit, Fitting & Accessories | ** | 0.2 MTPA | ** | Change in Product Mix | | ** | 0.2 MTPA | Ductile Iron Pipe, Fitting & Accessories |
| 13 | Captive Power Plant | WHRB Based 90 MW (54 MW from DRI Plant+ 34 MW from Coke Oven Plant + 2 | 225 MW | ** | Increase in WHRB Based CPP and surrendering 1 no CFBC (Coal & Dolochar Mix | (+) 14 MW (from WHRB-DRI), based | WHRB Based 104 MW (68 MW from DRI Plant) + 34 MW from | 194 MW | Power |

| Sl. No. | Units | As per EC dt-03.04.19 & 28.0120 | | Amendment under clause 7 (ii) b of EIA Notification | Proposed change | | Total (Existing + Proposed) | | |
|---------|-------------------------|--|------------|--|-----------------|----------------------------------|---|------------|----------------------|
| | | Configuration | Production | | Configuration | Production | Configuration | Production | Product |
| | | MW from EAF + CFBC (Coal & Dolochar Mix based) 3 x 45 MW] | | | based)CPP | CPP and (-) 45 MW CFBC based CPP | Coke Oven Plant + 2 MW from EAF+ CFBC (Coal & Dolochar Mix based) 2 x 45 MW] | | |
| 14 | Pellet Plant | 2 x 1.2 MTPA | 2.4 MTPA | 1 x 2.4 MTPA (Change in configuration within EC approved capacity) | No change | | 1 x 2.40 MTPA | 2.40 MTPA | Iron ore Pellet |
| 15 | I/O Beneficiation Plant | 2 x 1.2 MTPA | 2.4 MTPA | ** | No change | | 2 x 1.2 MTPA | 2.4 MTPA | Iron Ore Concentrate |
| 16 | Producer Gas Plant | 20 x 7,500 Nm ³ /hr | 1,50,000 | ** | No change | | 20 x 7,500 Nm ³ /hr | 1,50,000 | Producer Gas |

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

| Sl. No. | Raw Materials | Quantity Required (in TPA) | | | Source | Distance from Site (km) | Mode of Transportation |
|---------|-------------------------------|----------------------------|--------------|-----------|---|-------------------------|------------------------|
| | | As per EC | Proposed | Final | | | |
| 1 | Sized Iron Ore Lump and fines | 38,55,000 | (-) 1,02,466 | 37,52,534 | Barbil-Joda, Orissa | 201 | Rail/Road |
| 2 | Non-coking Coal | 1,721,125 | (-) 1,17,025 | 14,71,300 | CCL, MCL & Imported Coal. Captive Coal mines (Jagnathpur-B, Raniganj Coal Field, West Bengal) | -- | Rail/Road |
| 3 | Coking Coal | 6,70,000 | No Change | 6,70,000 | Purchased from BCCL, Dhanbad Alternate source: Imported | 177 | Rail/Road |
| 4 | Dolomite | 1,08,375 | (-) 8,295 | 1,00,080 | From Birmitrapur, Orissa/Bilaspur, CG | 264/541 | Rail/Road |
| 5 | Limestone | 2,42,023 | (-) 1,10,000 | 1,32,023 | From Birmitrapur, Orissa / | 264/541 | Rail/Road |

| Sl. No. | Raw Materials | Quantity Required (in TPA) | | | Source | Distance from Site (km) | Mode of Transportation |
|--------------|-------------------------|----------------------------|---------------------|------------------|--|-------------------------|------------------------|
| | | As per EC | Proposed | Final | | | |
| | | | | | Bilaspur, Raipur CG / Katni MP | | |
| 6 | Bentonite | 48,000 | No Change | 48,000 | Rajasthan & Gujarat | >1000 | Rail/Road |
| 7 | Manganese Ore | 3,12,000 | (-)1,88,000 | 1,24,000 | From Balaghat, MP & Orissa | 719 | Rail/Road |
| 8 | Chromium Ore | 2,64,000 | (-)1,58,400 | 1,05,600 | Jajpur, Orissa | 202 | Rail/Road |
| 9 | Quartzite | 4,38,125 | (-) 1,80,125 | 2,58,000 | From Belpahar, Orissa/Bilaspur, Raipur, CG | | Rail/Road |
| 10 | Inoculants | 192 | (-) 24 | 168 | Local Market | <150 | Road |
| 11 | Magnesium | 340 | (-) 40 | 300 | Local Market | <150 | Road |
| 12 | Runner Coat | 1,022 | (-) 122 | 900 | Local Market | <150 | Road |
| 13 | Slag Coagulant | 277 | (-) 13 | 264 | Local Market | <150 | Road |
| 14 | Zinc | 378 | (+) 30 | 408 | Local Market | <150 | Road |
| 15 | Bitumen/ Epoxy Solution | 941 KL/Year | (+) 209 | 1,150 KL/Year | WRAS Approved Vendor | <150 | Rail/Road |
| 16 | Sand | Variable | No change | Variable | Local Market | <150 | Road |
| TOTAL | | 76,61,898 | (-) 8,64,271 | 67,97,627 | | | |

28.8.8 The revised water requirement for the project is estimated as 10,128 m³ /day, out of which 10,128 m³/day of freshwater requirement will be obtained from the Kansabati River and treated waste water. The permission for drawl of surface water & waste water is obtained vide Memo No. 2623 PW dated 14-08-2018 & 677 km dated 04-08-2020.

28.8.9 The revised power requirement of the project is estimated as 263 MW, out of which 194 MW will be obtained from proposed 194 MW Captive Power Plant and the remaining 69.0 MW power will be obtained from WBSSEDCL/ open access.

28.8.10 Baseline Environmental Studies (post Project monitoring):

| Period | December, 2019 |
|--------------------------------|--|
| AAQ parameters at 08 locations | PM _{2.5} = 13 to 42 µg/m ³ PM ₁₀ = 70.1 to 82.3 µg/m ³ SO ₂ = 10 to 15 µg/m ³ NO ₂ = 19 to 27 µg/m ³ All other monitored data are within the limits. |
| AAQ modelling | Maximum glcs for PM ₁₀ , SO ₂ and NO _x at the revised configuration have been reduced from 11.46 µg/m ³ , 5.67 µg/m ³ and 4.3 µg/m ³ at EC configuration. The detail are: PM ₁₀ = 7.94 µg/m ³ SO ₂ = 4.12 µg/m ³ NO _x = 4.04 µg/m ³ |

| | |
|---------------------------------------|--|
| Ground water quality at 08 locations | pH: 6.67 to 7.15, Total Hardness: 56 to 196 mg/l, Chlorides: 12.6 to 25.3 mg/l, Fluoride 0.11 to 0.35 mg/l. Heavy metals are within the limits. |
| Surface water quality at 10 locations | pH: 6.9 to 7.8; DO: 7 to 7.7 mg/l and BOD: from 3 to 6 mg/l |
| Noise levels | 44.2 to 72.5 dB(A) for the day time and 37.3 to 64.7 dB(A) for the Night time. |
| Traffic assessment study findings | For the revised configuration there will be no increase in number of truck quantity, rather for 100 % material movement by road, truck quantity will be reduced by 4 trucks/hour inward and 4 trucks/hour outward from earlier estimated figure for which EC already obtained. |
| Flora and fauna | No Schedule I species was found in the core as well as buffer zone. |

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

| Sl. No. | Type of Waste | Source | Quantity Generated (TPA) | | | Mode of Treatment / Disposal |
|---------|---------------|--------------------|--------------------------|--------------|----------|--|
| | | | As per EC | Proposed | Total | |
| 1 | Slag | MBF | 673,000 | (-) 4,30,000 | 2,43,000 | To be used for Cement Making. |
| 2 | Dolo Char | DRI Plant | 1,75,000 | (+) 34,420 | 2,13,420 | To be used in proposed 2 x 45 MW CFBC Boilers. |
| 3 | Slag/ Scale | SMS (IF & EAF) | 1,09,083 | No Change | 1,09,083 | To be used for Road construction/ Land filling purpose, Paver Block Making after recovering metal from Slag Crushing unit; |
| 4 | Slag | Ferro Alloys Plant | 1,50,000 | (-) 1,26,460 | 23,540 | <ul style="list-style-type: none"> Slag generated during Ferro Manganese production will be used as a raw material for Silico Manganese production. Slag generated during Silico Manganese production will be used for road construction/land filling. After maximum recovery of Chrome, Ferro chrome slag after undergoing TCPL Test will be used in green concreting. |

| Sl. No. | Type of Waste | Source | Quantity Generated (TPA) | | | Mode of Treatment / Disposal |
|--------------|---|--------------------------------|--------------------------|---------------------|------------------|---|
| | | | As per EC | Proposed | Total | |
| 5 | Core Sand and Slag | DIP | 5,429 | (-) 652 | 4,777 | To be used for Road construction/ Land filling purpose |
| 6 | Cement Slurry | DIP | 572 | (-) 72 | 500 | To be used for Brick making and also in Captive Cement Plant |
| 7 | Bottom Ash | CPP | 5,44,916 | (-)1,87,416 | 3,57,500 | To be used for Road construction/ Land filling purpose |
| 8 | Dust | APC Devices | 2,86,220 | (-) 97,670 | 1,88,550 | Used in Sinter Plant and also APC dust from DRI ESP will be used for Brick Manufacturing |
| 9 | Kiln Accretion | DRI Plant | 5,000 | (+) 1,300 | 6,000 | Road Construction |
| 10 | Tar Sludge | Producer gas plant | 14,400 | No Change | 14,400 | To be sold to WBPCB authorized vendor |
| 11 | Miss Roll/End Cuts | Rolling Mill | 50,000 | No Change | 50,000 | To be used in Proposed S.M.S Plant. |
| 12 | Fly Ash | CPP | 3,01,860 | (-) 1,12,860 | 1,98,000 | To be used for Brick making and also in Captive Cement Plant |
| 13 | Sludge from Galvanizing & Pickling Line | Rolling Mill | 3,328 | No Change | 3,328 | Sent to (CHWTSDF) |
| 14 | Low Grade Fe | I/O Beneficiation plant | 2,12,000 | No Change | 2,12,000 | Use for Brick manufacturing/ Paver block making, aggregate in concrete, road construction |
| 15 | Iron oxide Powder from ARP | Rolling Mill | 1,750 | No Change | 1,750 | To be sold to Tape & Paint manufacture |
| 16 | Zinc Ash/ Dross | DIP & Rolling Mill | 865 | (-) 3 | 862 | To be sold to WBPCB Authorized Vendors |
| 17 | Sludge | ETP | 50 | No change | 50 | Sent to (CHWTSDF) |
| 18 | Molding Line | DIP Fitting & Accessories Unit | --- | (+) 5 | 5 | To be used for Road construction/Land filling purpose |
| 19 | Shot Blasting | | --- | (+) 8 | 8 | To be used for Road construction/Land filling purpose |
| 20 | Fettling Grinding | | --- | (+) 2 | 2 | To be used for Road construction/Land filling purpose |
| Total | | | 25,33,473 | (-) 9,19,698 | 16,13,775 | |

28.8.12 The company proposed to invest Rs. 23.0 crore on the CER activities over a period of 7 years in order to comply with the commitments made during the public hearing held on 28/03/2018. Till date, RASPL had spent 70.49 lakhs, details of which are given in below Table:

| Sl. No. | Project or Activity Identified | Sector Covered | Location | Amount Spent, in lakhs | Method |
|---------|---|------------------------|--|------------------------|--------|
| 1 | Free dispensary (Visiting days Monday, Tuesday & Saturday, Timing 10:00 AM to 12:30 PM) | Health | Narayanpur Village, Kharagpur, WB | 4,67,855 | Direct |
| 2 | Free dispensary (Visiting days Wednesday, Thursday & Friday, Timing 10:00 AM to 12:30 PM) | Health | Jagai Durga Utsav Committee, Kharagpur | 4,67,855 | Direct |
| 3 | Kabarsthan Boundary Wall (Total 360 Meter) | Rural Development | Narayanpur, Kharagpur, West Bengal | 11,00,000 | Direct |
| 4 | Village Boundary Wall (108 Meter) | Rural Development | Jagai, P.o-Shyamraipur, Kharagpur, Paschim Medinipur | 3,70,980 | Direct |
| 5 | Provide potable drinking water through deep bore well | Health & Drinking | Near Adibasi Para 3, Risha, Kharagpur, West Bengal | 80,000 | Direct |
| 6 | New Murum road construction (600 sqm) | Rural Development | Uttar NarayanPur, Kharagpur, West Bengal | 20,000 | Direct |
| 7 | New Murum road construction (300 sqm) | Rural Development | Jhatiban, Kharagpur, West Bengal | 15,000 | Direct |
| 8 | New Murum road construction (450 sqm) | Rural Development | Ali chowk, Kharagpur, West Bengal | 20,000 | Direct |
| 9 | Installation of 3 Solar Lights | Electrification | Narayanpur Village, Kharagpur, WB | 75,000 | Direct |
| 10 | Free Sapling distribution Programme. | Ecological Development | Krishna Nagar Junior High School, Vill.-Risha, P.o.-Shyamraipur, Dist.-Paschim Medinipur | 13,000 | Direct |
| 11 | A Free Health Check Up Camp (with free distribution of Spectacles & Medicines) | Health | Krishna Nagar ,Po-Shyamraipur, Dist.-Paschim Medinipur | 60,964 | Direct |

| Sl. No. | Project or Activity Identified | Sector Covered | Location | Amount Spent, in lakhs | Method |
|---------|--|-------------------|--|------------------------|--------|
| 12 | A Mega voluntary Blood Donation Camp was organized by the Management of OMPL, Unit-1 with collaboration of Blood Bank, Kharagpur | Health | Factory Premises | 82,775 | Direct |
| 13 | Free “Clothes Distribution” Programme conducted on 4th Oct’19 at the Village of Jagai. | Livelihood | Jagai, Kharagpur | 28,322 | Direct |
| 14 | Donation on the festival of Durga Puja at surrounding villages | Spiritual | Amba, Gokulpur, Midnapore | 14,430 | Direct |
| 15 | Free Saree Distribution” Programme was conducted on 25th Oct’19 inside the Factory premises. | Livelihood | Factory Premises | 13,570 | Direct |
| 16 | Donation on the Eve of Kali Puja at surrounding villages | Spiritual | Maheshpur, Nimpura, Kalaikunda etc. | 14,100 | Direct |
| 17 | Inter IIT Sports event Sponsorship | Sport | IIT, Kharagpur | 2,30,000 | Direct |
| 18 | Blanket Distribution to the poor & needy people for the fight against cold weather. | Livelihood | Chandvilla, Kalaikunda G.P | 15,000 | Direct |
| 19 | Provide of potable drinking water through deep bore well | Health & Drinking | Basantpur, Kharagpur, West Bengal | 80,000 | Direct |
| 20 | Provide of potable drinking water through deep bore well | Health & Drinking | Basantpur Roy Para, Kharagpur, West Bengal | 80,000 | Direct |
| 21 | Harimandir Utsav | Spiritual | Bharatpur, Shyamraipur, Gokulpur | 3,000 | Direct |
| 22 | Sponsorship for cricket Tournament | Sport | Mahespur, Shyamraipur, Gokulpur | 25,000 | Direct |

| Sl. No. | Project or Activity Identified | Sector Covered | Location | Amount Spent, in lakhs | Method |
|--------------|--|--------------------|---|------------------------|--------|
| | at village | | | | |
| 23 | Contribution to West Bengal State Emergency Relief Fund for Prevention & Control of COVID-19 | Emergency | West Bengal State Emergency Relief Fund | 25,00,000 | Direct |
| 24 | Relief to Ramkrishna Mission Ashram | Hunger Eradication | Ramkrishna Mission Ashram, Jhargram | 70,49,381 | Direct |
| 25 | Relief to surrounding villagers through honourable MLA | Hunger Eradication | Jogai, Amba, Krishna Nagar etc. | 2,60,000 | Direct |
| Total | | | | 70,49,381 | |

28.8.13 The capital cost of the project remains same i.e. Rs.1700 crore and the capital cost for environmental protection measures is same as stated in EC dated 03.04.2019 i.e. Rs 105.2 Crores. The annual recurring cost towards the environmental protection measures is also same as stated in EC dated 03/04/2019 i.e. Rs 11.35 Crores. 5500 in-direct employment & 3000 persons will get direct Employment during operational phase. The details of cost for environmental protection measures is as follows:

| Item | Capital Cost (in Crores) | Recurring Cost (in Crores) |
|--|--------------------------|----------------------------|
| Cost of Air Pollution Control System | 58.0 | 5.10 |
| Cost of Water conservation & Pollution Control | 5.0 | 0.50 |
| Cost of Solid Waste Management System | 6.0 | 0.60 |
| Green belt development | 9.0 | 0.50 |
| Noise Reduction Systems | 8.0 | 1.00 |
| Occupational Health Management | 4.5 | 0.45 |
| Risk Mitigation & Safety Plan | 6.5 | 0.60 |
| Online Monitoring Surveillance System | 3.8 | 1.40 |
| Setting Environmental Management Cell and | 3.0 | 0.70 |
| Setting Environmental Laboratory | 1.5 | 0.50 |
| GRAND TOTAL | 105.2 | 11.35 |

28.8.14 As per EC dated 03/04/2019, greenbelt will be developed in 41.40 ha which is about 33 % of the total plant area of 125.45 ha. A 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 1,03,500 saplings will be planted and nurtured in 40.1 hectares in 2 years. Till date 20% green belt is developed. To offset and compensate for the additional pollution load from stack emissions, additional 2% of the project area will be developed as green belt after implementation of the proposed proposal making all total 35% of the project area; i.e. about 43.91 ha.

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

| Particulars | As per EC dated 03.04.2019 & 28.01.2020 & intimation under clause 7 (ii) b dated 28.11.2020 | | After proposed change under para 7(ii) | % increase |
|-----------------------------|--|-------------------|--|------------|
| Land (ha.) | 125.45 | | No change | No change |
| Greenbelt (ha.) | 41.40 | | 43.91 | 2.0 % |
| Water (m ³ /day) | 22,248 | | 10,128 | (-) 54.5 % |
| Power (MW) | 334.8 | | 263 | (-) 21.4 % |
| Raw Materials (TPA) | 76,61,898 | | 67,97,627 | (-) 11.3 % |
| Products | 1.2 Million TPA integrated Steel plant with 225 MW CPP | | No change in ultimate production capacity of steel | *** |
| | Unit & Products | Production | Production (Million TPA) | |
| | Blast Furnace (Hot Metal / Pig Iron) | 1.0 MTPA | 0.60 MTPA | (-) 40.0 % |
| | Sinter Plant (Sinter) | 1.0 MTPA | 0.60 MTPA | (-) 40.0 % |
| | DRI Plant (Sponge Iron) | 0.50 MTPA | 0.744 MTPA | 48.80 % |
| | SMS with LRF, CCM and oxygen optimized furnace (Billets) | 1.0 MTPA | 1.0 MTPA | No change |
| | Ferro Alloy plant (FeSi, SiMn, FeSi & FeCr) | 0.12 MTPA | 0.048 MTPA | No change |
| | Cr Briquette Manufacturing plant | 40 TPH | 40 TPH | No change |
| | Coke Oven Plant (Metallurgical Coke) | 0.5 MTPA | 0.5 MTPA | No change |
| | Lime Dolomite Plant (Lime & Dolomite) | 200 TPD | 200 TPD | No change |
| | Oxygen Plant (Oxygen) | 200 TPD | 200 TPD | No change |
| | Hot Rolling Mill (H.R. Coils, Plates (Checkered or Flat)/ TMT Bar, Wire Rod & Wire/ Structural long product like- Angel, Channel & Beam) | 0.60 MTPA | 0.60 MTPA | No change |
| | Cold Rolling Plant with | 0.35 MTPA | 0.35 MTPA | No |

| Particulars | As per EC dated 03.04.2019 & 28.01.2020 & intimation under clause 7 (ii) b dated 28.11.2020 | After proposed change under para 7(ii) | % increase |
|---|---|--|------------|
| Pickling Line & Continuous Galvanizing (Galvanized Sheet/ Plate / Coils, Flat Sheet/ Checkered Sheet, Strip & Nail) | | | change |
| Ductile Iron Pipe Unit, Fitting & Accessories (DI pipe, fitting & accessories) | 0.20 MTPA | 0.20 MTPA | No change |
| WHRB-CPP (Power) | 90 MW | 104 MW | 15.5 % |
| Coal & Dolochar Based – CPP (Power) | 135 MW | 90 MW | (-) 33.3 % |
| Pellet Plant (Iron ore Pellet) | 2.4 MTPA | 2.4 MTPA | No change |
| I/O Beneficiation Plant (Iron Ore Concentrate) | 2.4 MTPA | 2.4 MTPA | No change |
| Producer Gas Plant (Producer Gas) | 1,50,000 Nm ³ /hr | 1,50,000 Nm ³ /hr | No change |

28.8.16 Pollution load assessment

| Sl. No. | Particulars | As per EC dated 03.04.2019 & 28.01.2020 | After proposed change under para 7 (ii) | % increase | Remarks |
|---------|---------------------------|--|--|------------|---|
| 1. | Air Emissions | PM-13.58 g/sec | PM-11.96 g/sec | (-)12.0 % | There is net decrease in pollution load for PM, SO ₂ and NO _x . |
| | | SO ₂ -19.10 g/sec | SO ₂ -16.11 g/sec | (-)15.7 % | |
| | | NO _x -14.50 g/sec | NO _x -13.65 g/sec | (-) 5.9 % | |
| 2. | Waste water generation | Industrial waste water - 56 m ³ /hr | Industrial waste water – 40 m ³ /hr | (-)28.6 % | There would be a decrease in waste water generation and the plant would continue to operate on Zero Effluent Discharge principle. |
| | | Domestic Waste Water - 9 m ³ /hr | Domestic Waste Water - 9 m ³ /hr | *** | |
| 3. | Make up water requirement | 22,248 KLD | 10,128 KLD | (-) 21.4 % | Water cooled system is changed to air cooled system. There is a net |

| Sl. No. | Particulars | As per EC dated 03.04.2019 & 28.01.2020 | | After proposed change under para 7 (ii) | % increase | Remarks |
|---------|---|---|-----|---|------------|---|
| | | | | | | decrease in make-up water requirement |
| 4. | Solid & Hazardous Waste generation | 2,533,473 TPA | | 16,13,775 TPA | (-) 36.3 % | There is an overall decrease in solid waste generation |
| 5. | Traffic Load (Total Numbers of Trucks per days) | Raw Materials | 626 | 555 | (-) 11.3 % | There will be decrease in traffic load. (Truck quantity will be reduced by 4 trucks/hour inward and 4 trucks/hour outward.) |
| | | Finished Product | 104 | No Change | No Change | |
| | | Solid Waste | 207 | 136 | (-) 34.3 % | |

28.8.17 It has been reported that Show cause Notice (SCN) was issued to Rashmi Group of companies located at Kharagpur, West Bengal vide letter no. J-11011/604/2010-IA.II dated 21/09/2020. Reply to SCN was submitted to MoEF&CC, New Delhi vide letter dated 29/10/2020 based on the non-compliances sated in the site visit report of the sub-committee, WBPCB and public representations dated 26/05/2020, 29/05/2020 and 06/06/2020 of Shri Bijay Kumar Mishra, Advocate. Subsequently based on submission personal hearing was conducted on 11/12/2020 chaired by Joint Secretary MoEF&CC, New Delhi and it was decided that PP may take requisite corrective action against each of the non-compliances reported by the different statutory authorities and submit the action taken report (ATR) to the ministry, with a copy to MoEF&CC Regional office, within a time frame of one month. Reply was submitted by PP on 14/01/2021.

28.8.18 EIA consultant - M/s. M. N. Dastur & Co (P) Ltd [S.No.168, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021].

Certified Compliance report from Regional Office

28.8.19 The status of compliance of earlier EC was obtained from Regional Office, MoEF&CC, Bhubaneswar vide letter no. 102-616/18/EPE, dated 03.06.2020 in the name of M/s. Rashmi Alloy Steel Private Limited. The Action taken report regarding the partially/non-complied condition was submitted to Regional officer MoEF&CC, Bhubaneswar vide letter no. RASPL/KGP/2020-2021/01 dated 16.06.2020. MoEF&CC (RO), Bhubaneswar evaluated the same and has issued letter No -102-616/18/EPE/956, dated 15.09.2020. Subsequently, Regional Office of the MoEF&CC has revisited the project to re-verify the compliance status and has issued letter No -102-616/18/EPE, dated 25.11.2020. The details of the observations made by RO in the report dated 25.11.2020 along with its re-assessment / present status as furnished by the PP is given as below.

| Sl. No. | Non-Compliances Details | Observation of RO (abridged) | Condition No. | | | Re-assessment by RO dated 25.11.2020 / Respond by PP |
|---------|---|---|---------------|----------|--|--|
| | | | EC date | Specific | General | |
| 1. | Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant. (VII. Green Belt and EMP-Condition No. i). | It has been observed that, PAs have planted fruit bearing plants in the project premises. It is required to follow CPCB guidelines for selection of species in green belt development programme | 03.04.2019 | | VII. Green Belt and EMP-Condition No. i | It has been observed that the PAs are taking care of not planning fruit bearing plants inside the plant premises and selection of species for Green belt development and will be strictly as per CPCB guidelines. |
| 2. | An amount of INR 2300 lakhs proposed towards Corporate Social Responsibility (CER) shall be utilized as capital expenditure in project mode as per the provisions of Office Memorandum vide F. No. 22-65/2017-IA.III dated 1st May 2018. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates (IX. Corporate environment Responsibility Condition No. vii). | It is required to implement the Corporate Environment Responsibility (CER) as per activities and time line mentioned in the Environmental Clearance. It requires immediate action. | 03.04.2019 | | IX. Corporate environment Responsibility Condition No. vii | It has been observed that the PAs are in process of implementing CER activities. As per report submitted, an amount of Rs. 70,49,381/- was spent till October, 2020 on various activities of CER viz., Health, Rural Development, Health & Drinking, Electrification, Livelihood, Spiritual, Sports, Emergency, etc. |
| 3. | The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs under Environment (Protection) Act, 1986 (II. Air quality monitoring and preservation Condition No. ii). | It is recommended that the fugitive emission to be monitored at least once in two months by MoEF&CC / NABL accredited laboratory and the monitoring reports to be submitted along with six monthly compliance reports on regular basis. | 03.04.2019 | | II. Air quality monitoring and preservation Condition No. ii. | It has been assured to monitor the fugitive emissions were monitored at three location viz., DRI / Pellet Plant Construction Area, Ferro Plant Area and Raw Materials Yard by third party monitoring agency M/s Envirocheck, Kolkata which is MoEF&CC/ NABL accredited laboratory. |
| 4. | The project proponent shall install system to carry out Continuous Ambient Air Quality monitoring for common/ criterion parameters relevant to | It is required to install Continuous Ambient Air Quality monitoring for common/ criterion parameters relevant to the main | 03.04.2019 | | II. Air quality monitoring and preservation-Condition No. iii | It has been observed that the PAs are in process of installing CAAQMS in the project premises. It has been stated that the PAs have consulted WBSPCB regarding selection of site for |

| Sl. No. | Non-Compliances Details | Observation of RO (abridged) | Condition No. | | | Re-assessment by RO dated 25.11.2020 / Respond by PP |
|---------|--|---|---------------|----------|--|---|
| | | | EC date | Specific | General | |
| | the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at an angle of 120° each), covering upwind and downwind directions. | pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at an angle of 120° each), covering upwind and downwind directions. | | | | installation of the same. Respond by PP: Continuous Ambient Air Quality Monitoring Station (USEPA/MCERT approved) is installed as per CPCB norms after getting site approval from WBPCB. |
| 5. | The project proponent shall install system to carry out Continuous Ambient Air Quality monitoring for common/ criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at an angle of 120° each), covering upwind and downwind directions. | It is recommended that the AAQ to be monitored at least once in two months by MoEF&CC/ NABL accredited laboratory and the monitoring reports to be submitted along with six monthly compliance reports on regular basis. | 03.04.2019 | | II. Air quality monitoring and preservation-Condition No. iii | It has been observed that the AAQ is being monitored at four locations viz., Near Plant Main Gate, Truck Parking Area, Kalaikunda Village and Sahachowk by third party monitoring agency M/s Envirocheck, Kolkata which is MoEF&CC/ NABL accredited laboratory. |
| 6. | The ambient noise levels should conform to the standards prescribed under E(P)A rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time. (IV. Noise monitoring and prevention-Condition No. i). | As per monitoring reports submitted, Noise levels were monitored in the month of December, 2019 and the noise levels were exceeded the day time prescribed limits. It is required to take precautionary measures to controls the noise levels during day time operations. | 03.04.2019 | | IV. Noise monitoring and prevention-Condition No. i | It has been observed that the noise levels are being monitored at five locations viz., Near Plant Main Gate, Truck Parking Area, DRI Plant Construction Area, Ferro plant Area and CPP Area by third party monitoring agency M/s Envirocheck, Kolkata which is MoEF&CC/ NABL accredited laboratory. |
| 7. | The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the | It is required to prepare GHG emissions inventory for the plant and shall submit the programme for | 03.04.2019 | | VII. Green Belt and EMP-Condition No. vi | As per the ATR submitted, it has been observed that the copy of GHG emissions inventory for the plant has been submitted |

| Sl. No. | Non-Compliances Details | Observation of RO (abridged) | Condition No. | | | Re-assessment by RO dated 25.11.2020 / Respond by PP |
|---------|--|---|---------------|----------|---|---|
| | | | EC date | Specific | General | |
| | same including carbon sequestration including plantation (VII. Green Belt and EMP-Condition No. vii). | reduction of the same including carbon sequestration including plantation. It requires immediate action. | | | | |
| 8. | Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented (VIII. Public hearing and Human health issues-Condition No. i). | It is required to submit the copies of Emergency preparedness plan, Hazard identification and Risk Assessment (HIRA) report and Disaster Management Plan to Regional office, Bhubaneswar. | 03.04.2019 | | VIII. Public hearing and Human health issues-Condition No. i). | As per the ATR submitted, it has been observed that the copy of Emergency preparedness plan, Hazard identification and Risk Assessment (HIRA) report and Disaster Management Plan has submitted. |
| 9. | The commitment made by the project proponent to the issues raised during Public Hearing shall be implemented by the proponent (VIII. Public hearing and Human health issues-Condition No. vi). | It is required to implement the issues raised during Public Hearing as per activities and time line mentioned in the Environmental Clearance. It requires immediate action. | 03.04.2019 | | VIII. Public hearing and Human health issues-Condition No. i). | It has been observed that the PAs are in process of complying the issue raised during Public Hearing is as per the status submitted by PP in the ATR submitted on 16/06/2020. |
| 10. | The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company (X. Miscellaneous-Condition No. iv). | It is required to display the emission levels of pollutants at a convenient location for disclosure to the public and put on the website of the company. It is required immediate action. | 03.04.2019 | | X. Miscellaneous-Condition No. iv. | As per the ATR submitted, it has been observed that the recent six-monthly compliance report for period (October 2019 to March 2020) is uploaded on company website and is available on URL http://orissametaliks.com/data/Compliance_June-2020-RASPL.pdf . |

28.8.20 Observations of the Committee

- i. EAC taken cognizance of the SCN issued by MoEF&CC vide letter dated 21/09/2020 to M/s. Rashmi Group companies located at P.O – Shyamraipur, P.S – Kharagpur (L), District Paschim Medinipur, West Bengal, response of PP to SCN, personal hearing by joint secretary and ATR submitted by the PP for further action by the Ministry.
- ii. Committee noted that representation from Climate Action Group dated 18/01/2021 and

many by others, wherein it is stated that PP has already installed higher configuration of DRI kiln at the site without obtaining prior Environment Clearance for which instant proposal is under consideration.

- iii. Presently, the response submitted by the proponent as well as public representation of Climate Action Group have been forwarded to RO for ascertaining the factual status and the same is awaited.
- iv. The Committee was of the considered view that RO site verification report is essential in order to take appropriate view on the proposal under consideration.

Recommendations of the Committee

28.8.21 In view of the foregoing and after detailed deliberations, the committee recommended to return the proposal in present form and requested to submit the same along with RO site verification report.

28.9 Proposed expansion of Ferroalloys plant by installation of 2X7.5 MVA SEAFs for manufacture of Fe-Cr/Fe-Mn/Si-Mn/Fe-Si, expansion of Sponge Iron Plant by installation of 1X350 TPD DRI Kilns, Iron Ore Beneficiation Plant with Pellet Plant of capacity of 6,00,000 TPA; expansion of Captive Power Plant with installation of 8MW using waste heat DRI off gas and 2 X 16 MW AFBC utilizing dolochar and coal, expansion of Steel Melting Shop, installation of Rolling Mill with Reheating Furnace (Coal Gasifier /Pulverized Coal Fired/Oil fired or Direct Feeding from CCM) for production of 2,00,000 TPA Structural /Rebar /Rounds and installation of Cement Grinding Plant 1x1000 TPD for annual production of 3, 00,000 TPA PPC/PBFC by **M/s. Ispat Damodar Private Limited** located at village-Nambagram, PO. Digha, P.S.- Neturia, **Dist. Purulia, West Bengal** [Online Proposal No. IA/WB/IND/62286/2017; File No. J-11011/52/2017-IA II(I)] – **Environment Clearance** – regarding.

28.9.1 M/s. Ispat Damodar Private Limited has made an online application vide proposal no. IA/WB/IND/62286/2017 dated 31/12/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & nonferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by Project proponent

28.9.2 The details of the ToR is furnished as below:

| Date of Application | Consideration | Details | Date of Accord |
|----------------------------|---|-------------------------------|-----------------------|
| 08/02/2017 | 16 th meeting of EAC held on 6 th – 7 th March 2017. | Terms of Reference | 27/03/2017 |
| 17/01/2020 | - | Extension of validity of ToR. | 10/02/2020 |

28.9.3 The project of M/s. Ispat Damodar Private Limited located in Nabagram Village, Purulia Tehsil, Purulia, District, West Bengal State is for expansion of Ferroalloys plant by installation of 2X7.5 MVA SEAFs for manufacture of Fe-Cr/Fe-Mn/Si-Mn/Fe-Si, expansion of Sponge Iron Plant by installation of 1X350 TPD DRI Kilns, Iron Ore Beneficiation Plant

with Pellet Plant of capacity of 6,00,000 TPA; expansion of Captive Power Plant with installation of 8MW using waste heat DRI off gas and 2 X 16 MW AFBC utilizing dolochar and coal, expansion of Steel Melting Shop, installation of Rolling Mill with Reheating Furnace (Coal Gasifier /Pulverized Coal Fired/Oil fired or Direct Feeding from CCM) for production of 2,00,000 TPA Structural /Rebar /Rounds and installation of Cement Grinding Plant 1x1000 TPD for annual production of 3, 00,000 TPA PPC/PBFC.

28.9.4 Environmental Site Settings

| S.No. | Particulars | Details | Remarks |
|-------|--|--|--|
| i. | Total land | 43.42 ha [Private: - 24.10ha; Govt19.32ha;] | Land use: Industrial land. |
| ii. | Land acquisition details as per MoEF&CC O.M. dated 7/10/2014 | Land acquisition has been completed. | |
| iii. | Existence of habitation & involvement of R& R, if any. | No habitation exists on the land where proposed expansion would come. Therefore no involvement of R&R issues. | |
| iv. | Latitude and Longitude of the project site | 22°22'03.3'' N 87°09'09.3'' E | |
| v. | Elevation of the project site | 120m | |
| vi. | Involvement of Forest land if any. | - | Not applicable. |
| vii. | Water body exists within the project site as well as study area | Project site: No water body exists within the project site Study area (1) River Damodar – 3.6kms from project site. (2) Uttala River – 3.3kms from project site. | Authenticated HFL data of the water body shall be furnished. This area is not coming under flood hazard zone. |
| viii. | Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area | Study area Name with distance Status of NBWL approval: | Not applicable. |

28.9.5 The existing project was accorded Consent to Establish vide Ir. no. 3518-2N-208/2003 dated 07/11/2003. Consent to Operate for the existing unit was accorded by West Bengal State Pollution Control Board vide Ir. no. 2076–WPBA/Red(PrI)/Cont(210)/10, dated 30/10/2018.

The validity of CTO is up to 31/10/2023.

28.9.6 Implementation status of the existing CTO: The plant is running with valid CTO of WBPCB. The CTO is issued for following unit:

| Sl. No. | Facilities | Units | As per EC | Implementation Status | Production as per CTO |
|---------|--|--------------------------|-----------|-----------------------|-----------------------|
| 1. | Ferro Alloys Furnace | 4 X 7.5MVA | - | Producing unit | |
| | i. Ferro Manganese | | - | - | 6000 MT/Month |
| | ii. Silico Manganese | | - | - | 5000 MT/Month |
| 2. | Sponge Iron Plant | 2 X 100 TPD | - | - | 5000 MT/Month |
| 3. | Captive Power Plant (WHRB + AFBC) | 4MW + 4 MW | - | - | 8 MW |
| 4. | Steel Melting Shop (SMS) Induction Furnace | 2 X 4T/heat + 1 X8T/heat | - | - | 4,000 MT/Month |
| 5. | Continuous Casting Machine (CCM) | 1 X 6/11m | - | - | 4,000 MT/Month |

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

| S. No. | Name | Existing Units | | Proposed Units | | Total (Existing +Proposed) | |
|--------|--|----------------------|-----------------|-------------------------|-----------------|---|-----------------|
| | | Configura tion | Producti on TPA | Configurati on | Producti on TPA | Configuration | Producti on TPA |
| 1. | Ferro Alloy Furnaces | 4 x7.5 MVA | 78,667 | 2x7.5 MVA | 39,333 | 4 x7.5 MVA + 2x7.5 MVA | 1,18,800 |
| 2. | Sponge Iron Plant | 2 x 100 TPD | 60,000 | 1X350 TPD | 1,0,5000 | 2 x 100 TPD + 1X350 TPD | 1,65,000 |
| 3. | Iron Ore Beneficiation & Pelletisation Plant | -- | -- | -- | 6,00,000 | -- | 6,00,000 |
| 4. | Captive Power Plant | 4MW WHRB + 4 MW AFBC | 8 MW | (8MW WHRB+2X16 MW AFBC) | 40 MW | [4MW WHRB + 4 MW AFBC] + (8MW WHRB+2X16MW AFBC) | 48 MW |
| 5. | Steel Melting Shop | | | | | | |

| S. No. | Name | Existing Units | | Proposed Units | | Total (Existing +Proposed) | |
|--------|---|------------------------|----------------|----------------|----------------|---|----------------|
| | | Configuration | Production TPA | Configuration | Production TPA | Configuration | Production TPA |
| | i. Induction Furnace | 2x4 T/heat, 1X8 T/heat | 48,000 | 2x15 T/heat | 90,000 | [2x4 T/heat + 1X8 T/heat] + 2x15 T/heat | 1,38,000 |
| | ii. Electric Arc Furnace (EAF) | -- | -- | 1X 20T/heat | 96,000 | 1X 20T/heat | 96,000 |
| | iii. Ladle Refining & Tilting Furnace (LRF) | -- | -- | 1X 20T/heat | 96,000 | 1X 20T/heat | 96,000 |
| | iv. VOD/VID/AO | -- | -- | 1X 20T/heat | 96,000 | 1X 20T/heat | 96,000 |
| | v. Continuous Casting Machine (CCM) | 1x 6/11 m. | -- | 1x 6/11 m. | -- | 2x 6/11 m. | -- |
| 6. | Rolling Mill with Preheating Furnace (Coal gasifier/ Pulverized Coal / Oil fired) or Direct feeding from CCM (Structural/ Rebar /Round) | -- | -- | -- | 2,00,000 | -- | 2,00,000 |
| 7. | Cement Grinding Plant (PPC / PBFC) | -- | -- | 1 X 1000 TPD | 3,00,000 | 1 X 1000 TPD | 3,00,000 |

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

| Sl. No. | Raw Material | Consumption in tonnes per ton of product | Amount in tonnes | Likely Source | Mode of Transport |
|---|--|--|------------------|---|---------------------------|
| Iron Ore Beneficiation Plant (8,25,000 T throughput) | | | | | |
| 1. | Iron Ore Fines (in case of no beneficiation pellets will be purchased) | 0.8 | 8, 25,000 | Mines in Barbil/ Joda of Odisha | By Rail |
| Pellet Plant (6,00,000 TPA) | | | | | |
| 1. | Iron Ore Concentrate | 1.1 | 6,60,000 | Own production | -- |
| 2. | Coke Fines | 0.15 (150kg) | 9,000 | Durgapur Steel Plant/ Coking Plant of Durgapur Project Ltd. | By Road in covered trucks |
| 3. | Bentonite | 0.05 (50kg) | 3,000 | Local Market may be taken from brand steel if required for foundry shop | By Road (325 kms) |
| 4. | Limestone (will be required only after | 0.15 (150kg) | 9,000 | Biramitrapur, Sundargarh, Odisha | By Road in covered trucks |

| Sl. No. | Raw Material | Consumption in tonnes per ton of product | Amount in tonnes | Likely Source | Mode of Transport |
|---|---------------------------|--|------------------|--|---|
| | cement plant) | | | | |
| Sponge Iron Plant (1,65,000 TPA) | | | | | |
| 1. | Iron Ore/Pellets | 1.6 | 2,64,000 | Mines in Barbil/ Joda of Odisha | By Rail /Road in covered trucks (60-75 kms) |
| 2. | Purchased Coal and Coke | 1.3 | 2,14,500 | Nearby Coal Mines of ECL and BCCL | By Rail /Road in covered trucks |
| 3. | Dolomite | 0.05 (50kg) | 8,250 | Biramitrapur, Sundargarh, Odisha or Mines in North Bengal | By Rail /Road in covered trucks (70kms) |
| Ferroalloy Plant-Ferro Chrome (81,000 TPA) (Existing Plant 4 X 7.5 MVA, Expansion 2X 7.5MVA) | | | | | |
| 1. | Chromites Ore Hard Lump | 0.32 | 25,759 | Sukinda, Jajpur dist., Odisha | By rail /road in covered trucks |
| 2. | Chromite Ore Briquettes | 1.9 | 1,53,900 | Own plant | -- |
| 3. | Chromite Ore Friable Lump | 0.13 | 10,287 | Sukinda, Jajpur dist., Odisha | By rail /road in covered trucks |
| 4. | Quartzite | 0.28 | 22,599 | Mines in Bankura W. Bengal and Chhatisgarh | By rail /road in covered trucks |
| 5. | Coke | 0.5 | 40,582 | Own production | -- |
| 6. | Coal | 0.3 | 23,734 | Nearby Coal Mines of ECL and BCCL | By rail /road in covered trucks |
| 7. | Electrode Paste | 0.025 | 2,025 | Maharashtra Carbon Ltd., Graphite India, Durgapur | By rail /road in covered trucks |
| <i>* Will be purchased when Ferro-chrome production becomes operational</i> | | | | | |
| Ferroalloy Plant-Ferro Manganese (1,18,800 TPA) | | | | | |
| 1. | Manganese Ore | 2.3 | 2,72,918 | OMC Manganese mines in Odisha | By Rail /Road in covered trucks |
| 2. | Dolomite | 0.35 | 41,630 | Biramitrapur, Sundargarh, Odisha | By Rail /Road in covered trucks |
| 3. | Low Ash Met Coke | 0.6 | 71,280 | Durgapur Steel Plant /Coking Plant of Durgapur Projects Ltd. | By Rail /Road in covered trucks |
| 4. | Electrode Paste | 0.015 | 1,782 | Maharashtra Carbon Ltd., Graphite India Ltd., Durgapur | By Rail /Road in covered trucks |
| Ferroalloy Plant-Ferro Silicon (42,000 TPA) | | | | | |
| 1. | Quartz / Gravel | 0.5 | 84,000 | Mines in Chhattisgarh, Odisha | By Rail /Road in covered trucks |
| 2. | Charcoal | 1.5 | 63,000 | Local Market | By Rail /Road in covered trucks |
| 3. | Iron Scrap | 0.35 | 14,700 | Local Rolling Mills and own production | By Rail /Road in covered trucks |
| 4. | Electrode Paste | 0.06 | 2520 | Maharashtra Carbon Ltd, Graphite India Ltd, Durgapur | By Rail /Road in covered trucks |

| Sl. No. | Raw Material | Consumption in tonnes per ton of product | Amount in tonnes | Likely Source | Mode of Transport |
|---|--|--|------------------|--|---|
| 5. | MS Round | 0.027 | 1,140 | Steel Plant of SAIL /TISCO | By Road (325 kms) |
| Ferroalloy Plant-Silico Manganese (89,100 TPA) | | | | | |
| 1. | Manganese Ore | 1.79 | 1,59,442 | Manganese Mines in Odisha /Chhattisgarh | By Rail /Road in covered trucks |
| 2. | Dolomite | 0.35 | 31,185 | Mines in Odisha, Chhattisgarh | By Rail /Road in covered trucks |
| 3. | Fe-Mn Slag | 0.6 | 53,460 | Own Production | -- |
| 4. | Low Ash Met coke | 0.6 | 53,460 | Imported coal | From Australia by Ship & then by Rail /Road |
| 5. | Electrode Paste | 0.025 | 2228 | Maharashtra Carbon Ltd., Graphite India Ltd., Durgapur | By Rail /Road in covered trucks |
| 6. | Cashing Sheet / MS Sheet | 0.01 | 891 | Steel Plants Of SAIL/TISCO | By Road (325 kms) |
| SMS - Induction Furnace (Annual Production-1,38,000 TPA) | | | | | |
| 1. | Sponge Iron | 0.806 | 1,11,350 | In Plant Production | -- |
| 2. | Pig Iron /Iron Scrap | 0.35 | 48,300 | Local Market | By Road in covered trucks (325 kms) |
| 3. | Ferroalloys | 0.02 | 2,760 | In plant production | -- |
| SMS- Electric Arc Furnace (96,000 TPA) | | | | | |
| 1. | Iron Scraps | 0.556 | 53,400 | Local Rolling Mills | By Road in covered trucks |
| 2. | Sponge Iron | 0.456 | 43,770 | | -- |
| 3. | Graphite Electrode or Electrode Paste | 0.009 | 860 | Maharashtra Carbon Ltd., Graphite India Ltd., Durgapur | By Road in covered trucks |
| 4. | Lime | 0.071 | 6,880 | Biramitrapur, Sundergarh, Odisha | By Road in covered trucks |
| 5. | Coke | 0.013 | 1,260 | In plant production | By Road in covered trucks |
| Reheating Furnace/Rolling Mill (2,00,000 TPA) | | | | | |
| 1. | Billets | 1.07 | 2,14,000 | In plant production from IFs and EAFs | -- |
| 2. | Furnace Oil /Pulverized Coal (Not decided yet) | 0.042 | 8400 KL | Local Oil Terminals | By Road in Tankers |
| Cement Grinding Plant (3,00,000 TPA) | | | | | |
| 1. | Cement Clinker | 0.6 | 1,80,000 | From neighboring cement units | Rail /Road by covered trucks |
| 2. | Fly Ash | 0.35 | 1,05,000 | In plant generation | -- |
| 3. | Gypsum | 0.05 | 15,000 | IFFCO and PPL, Paradeep | By Rail /Road in |

| Sl. No. | Raw Material | Consumption in tonnes per ton of product | Amount in tonnes | Likely Source | Mode of Transport |
|---|--------------|--|---|---|---------------------------------|
| | | | | | covered trucks |
| Captive Power Plant based on WHRB (8 MW) | | | | | |
| 1. | DRI Flue gas | | 1,05,000 Nm ³ /hr at 950-1000 ^o C | In plant Production | Duct |
| 2. | Water | | 36 t/hr. | Panchet Reservoir on river Damodar | Pipe Line |
| Captive Power Plant based on FBC (2 X 16 MW) | | | | | |
| 3. | Dolochar | | 4,585 | In plant production | -- |
| 4. | Coal fines | | 14,850 | In plant production & purchase from open market | By Rail /Road in covered trucks |
| 5. | Coal | | 1,83,535 | From nearby Coal fields of ECL and BCCL | By Rail /Road in covered truck |

28.9.9 The water requirement for the project is estimated as 3028 m³ /day, out of which 3028m³/day of fresh water requirement will be obtained from the reservoir over River Damodar and the permission for drawl of surface water is obtained from Damodar Valley Corporation vide Lr. No. MRO / Tariff Cell/-115, dated 19.01.2015.

28.9.10 The power requirement for the project is estimated as 77MW, out of which 29 MW will be obtained from the DVC Grid.

28.9.11 Baseline Environmental Studies:

| | |
|---------------------------------------|--|
| Period | 01.10.2017 to 31.12.2017 |
| AAQ parameters at 08 locations | PM _{2.5} = 30.2 to 41.5 µg/m ³ PM ₁₀ = 52.1 to 71.8 µg/m ³ SO ₂ = 9.1 to 11.2 µg/m ³ NO _x = 9.5 to 16.8 µg/m ³ CO = 0.2 to 0.3 µg/m ³ |
| AAQ modelling | PM ₁₀ = 5.55 µg/m ³ SO ₂ = 38.9555 µg/m ³ NO _x = 19.76698µg/m ³ CO = µg/m ³ |
| Ground water quality at 08 locations | pH: 7.06 to 7.85, Total Hardness: 320 to 410mg/l, Chlorides: 40 to 71 mg/l, Fluoride: 0.63 to 0.81mg/l. Heavy metals are within the limits. |
| Surface water quality at 08 locations | pH: 7.53 to 7.91.; DO: 5.6 to 8.2 mg/l and BOD: 1.2 to 2.8 mg/l., |
| Noise levels 08 locations | 40.8 to 72.5 for the day time and 34.6 to 55.1 for the Night time. |
| Traffic assessment study findings | The existing road net work is capable of handling the traffic load after the proposed expansion |
| Flora and fauna | Presence of schedule I fauna if any. If yes, status of site specific wildlife conservation plan |

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

| S. No. | Type of Waste | Source | Quantity generated (TPA) | Mode of Treatment / Disposal |
|-------------------------|----------------|---|--------------------------|---|
| SOLID WASTES | | | | |
| 1. | Tailing | Iron ore Beneficiation Plant | 1,81,500 | Will be removed from tailing pond and disposed of in solid waste yard. |
| 2. | Dust | From APC device of Pellet Plant | 9,900 | Will be recycled back to the process. |
| 3. | Dolo Char | DRI Plant | 54,450 | Used in FBC Boiler for power generation. |
| 4. | Coal fines | DRI Plant | 19,635 | Used in FBC Boiler. |
| 5. | Dust | From ESP & Bag filter of DRI Plant | 18,150 | ESP dust used in Fly ash brick making & Bag filter dust used in low land filling. |
| 6. | Kiln Accretion | DRI Plant | 12,375 | Will be used for road making. |
| 7. | Slag | Induction Furnace | 18,480 | Sold to cement manufacturers. |
| 8. | Dust | From Bag filter of Induction Furnace | 1,848 | Sent to pelletisation plant. |
| 9. | Slag | Electric Arc Furnace | 19,470 | Filling low lying areas. |
| 10. | Dust | From Bag Filter of Arc Furnace | 3,04,920 | Sent to pelletisation plant. |
| 11. | Fe-Mn Slag | Ferroalloy Plant | 1,09,230 | Used as raw material for Si-Mn. |
| 12. | Si-Mn slag | Ferroalloy Plant | 90,090 | Used as road construction material. |
| 13. | Fe-Si Slag | Ferroalloy Plant | 6,435 | Used as road construction material |
| 14. | Fe-Cr Slag | Ferroalloy Plant | 1,15,830 | TCLP test would be conducted. Subject that the slag is not hazardous it will be used as base material for road construction. |
| 15. | Dust | From APC devices of Ferroalloys Plant | 330 | Sold to brick manufacturers. The dust from Fe-Cr production may be hazardous which will be given to Hazardous Waste processors. |
| 16. | Fly Ash | Captive Power Plant with WHRB and FBC Boilers | 1,18,140 | Used in cement making. |
| 17. | Bottom Ash | Captive Power Plant with WHRB and FBC Boilers | 16,500 | Sold to brick manufacturers. |
| 18. | Dust | From Bag filters Cement Power Plant | 4,950 | Mixed with the product. |
| 19. | Sludge | From sludge from neutralization pit | 1 | Impervious Pit. |
| HAZARDOUS WASTES | | | | |
| 21. | Used Oil/Used | From the Plant | 1.2 kl/Year | Will be sold to authorized Re- |

| S. No. | Type of Waste | Source | Quantity generated (TPA) | Mode of Treatment / Disposal |
|--------|--------------------------------|----------------|--------------------------|--|
| | Lubricants | | | processors. |
| 22. | DM Plant Resin | From the Plant | 700 kg in 5 years | Will be disposed of in impervious pit. |
| 23. | Sludge from neutralization pit | From the Plant | 0.7 T/Year | Disposed of in impervious pit. |
| 24 | Waste Oil/ Used Cotton Wastes | From the Plant | 600kg/Year | Disposed of in impervious pit. |

28.9.13 Public Consultation:

| | |
|--------------------------------|---|
| Details of advertisement given | 29.10.2018 |
| Date of public consultation | 29.11.2018 |
| Venue | Sub-divisional Office of Raghunathpur, Dist.: Purulia, West Bengal. |
| Presiding Officer | WBCS (Exe), Additional District Magistrate (G) Dist: Purulia, West Bengal. |
| Major issues raised | i. Employment opportunity for local people. ii. Efficient management of pollution control. iii. Infrastructure development of the locality. |

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

| S. NO. | Concerns raised during the Public Hearing | Physical activity and action plan | Tentative Budget, Rs Lacs | Target date for implementation of action plan |
|--------|---|---|---------------------------|---|
| 1. | Improvement in healthcare facilities | Construction of community latrine and toilet with water supply facility in 7 villages | Rs 21 Lacs | 2 years |
| | | Providing ambulance with emergency equipments to address the emergency needs of 7 villages | Rs 15 Lacs | 1 year |
| 2. | Improvement in drinking water facilities | Construction of bore well with overhead tank and tap facility in seven villages to supply drinking water. | Rs 28 Lacs | 2 years |
| 3. | Improvement in education facilities | Setting up library with study facilities in 6 villages. | Rs 30 Lacs | 2 years |
| 4. | Village infrastructure activities | Repairing of village roads and culverts in 7 villages. | Rs 28 Lacs | 2 years |
| | | Installation of solar lights on village road | Rs 21 Lacs | 2 years |

28.9.14 The capital cost of the project is Rs.190 Crores and the capital cost for environmental protection measures is proposed as Rs. 9.65 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 0.95 Crores. The employment generation from the expansion is 136. The details of cost for environmental protection measures is as follows:

| S. No. | Description of Item | Existing (Rs. In lakhs) | |
|--------------|-------------------------------|-------------------------|----------------|
| | | Capital Cost | Recurring Cost |
| i. | Air Pollution Control / Noise | 625 | 62.5 |
| ii. | Water Pollution Control | 125 | 10.0 |
| iii. | Solid waste management | 50 | 6.0 |
| | Environmental monitoring | 60 | 6.0 |
| | Occupational health | 32.5 | 3.0 |
| | Safety & Disaster Management | 22.5 | 2.5 |
| iv. | Green Belt Development | 35 | 3.5 |
| v. | EMS & Training | 12.5 | 1.5 |
| Total | | 962.5 | 95 |

28.9.15 Greenbelt will be developed in 14.17 ha which is about 34 % of the total project area. A10 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 25300 saplings will be planted and nurtured in 12.47 hectares in 2 years.

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

28.9.17 Name of the EIA consultant: M/s. Centre for Envotech and Management Consultancy Pvt. Ltd., Bhubaneswar [S.No. 89, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021].

Certified compliance report from Regional Office

28.9.18 The Status of compliance of condition of existing CTO has been obtained from SPCB, West Bengal *vide* letter no. 959(I)-WPBA/Red(Prl)/Cont(210)/10(Pt – II), dated 05.03.2020 in the name of M/s. Ispat Damodar Pvt. Ltd. No non-compliances have been reported. No non-compliances have been reported.

28.9.19 Earlier, M/s. Ispat Damodar Private Limited has made online application vide proposal no. IA/WB/IND/90432/2017 dated 17/11/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The said proposal was considered in 25th meeting of the Re-constituted EAC (Industry-I) held during 25th-27th November, 2020. The observations and recommendations made by the EAC during the meeting are as follows:

Observations of the Committee held during 25-27th November, 2020

The Committee noted the following:

- i. Interpretation of Environment Baseline and Socio-economic data has not been carried out to predict the impact of project on these components in Chapter 4.
- ii. Quantification of impacts and mitigation measures has not been carried out in Chapter 4.
- iii. TOR point #9 has not been complied and presented in chapter 10.
- iv. Engineering drawing to the scale has not been submitted.
- v. Action plan for green belt development covering 33% of the plant area has not been submitted. Plantation may be completed in two years.

- vi. Details of PGP capacity and treatment methodology for phenolic contaminated effluent has not been submitted.
- vii. Commitment on percentage of employees from local community shall be indicated.
- viii. CTO Compliance report from SPCB shall be furnished.
- ix. Action plan for IOBP tailings handling has not been submitted.
- x. Action plan for waste recycling and reduction measures has not been furnished.
- xi. Design details of the SLF proposed inside the plant has not been submitted.
- xii. EMP for Social and Infrastructure development activities shall be selected from SIA and Public consultation and these shall be in project mode as EMPs as per MoEF&CC Office Memorandum dated 30/09/2020.
- xiii. PP may use ultralow NOx burner with three stage combustion, flue gas recirculation and auto combustion control system.

Recommendations of the Committee held during 25-27th November, 2020

In view of the above, the Committee, after detailed deliberations, recommended to return the proposal in its present form.

28.9.20 M/s. Ispat Damodar Private Limited has revised application vide proposal no. IA/WB/IND/62286/2017 dated 31/12/2020. The proposal was placed before the EAC (Industry 1) in its 28th meeting of the Re-constituted EAC (Industry-1) held during 18-20th January, 2021.

Observations of the Committee

28.9.21 The Committee noted that the presentation made by PP was very poor and ineffective. Submission was like text book and fails to divulge the information sought at para 28.9.19 above to the EAC for making appropriate recommendation.

Recommendations of the Committee

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

28.10 Greenfield Steel Plant to produce 462000 TPA Sponge Iron, 520000 TPA Billets, 500000 TPA TMT bars and 70 MW CPP by **M/s. Maa Kudargarhi Energy & Ispat Pvt. Ltd.** located at Village Tangargaon, Tehsil Kansabel (earlier Bagicha), **District Jashpur, Chhattisgarh** [Online Proposal No. IA/CG/IND/190878/2020, File No. J- 11011/11/2021-IA.II(I)] – **Prescribing of Terms of Reference** – regarding.

28.10.1 M/s. Maa Kudargarhi Energy and Ispat Pvt Ltd has made an application online vide proposal No. IA/CG/IND/190878/2020 dated 31/12/2020 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No 3(a) Metallurgical industries (ferrous & nonferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by Project proponent

28.10.2 The project of M/s Maa Kudargarhi Energy and Ispat Pvt Ltd located in Tangargaon village, Kansabel Tehsil, Jashpur District, Chhattisgarh State is for setting up of a new Greenfield Steel Plant for production of 0.462 MTPA (462000 TPA) sponge iron, 0.52 MTPA (520000

TPA) Billets, 0.5 MTPA (500000 TPA) TMT Bar and 70 MW electricity. (MTPA- Million Tons Per Annum).

28.10.3 Environmental site settings

| S.No. | Particulars | Details | Remarks | | | | |
|-------------|--|--|---|----------|-------------|-------|---|
| i. | Total land | 28.82 ha [Private: 28.82 ha, Govt 0 ha, Agriculture: 20.5 ha, Grazing land- 0 ha, barren land- 8.3 ha | Land use: Single crop agriculture land- 20.5 ha Barren land- 8.3 ha | | | | |
| ii. | Existence habitation involvement R&R, if any. of & of | Habitation – Nil No resettlement Mutually negotiated price will be paid for purchase of land. Rehabilitation will be done as per policy of CG Govt. | - | | | | |
| iii. | Latitude Longitude of project site and the | Latitude 22°35'47.05"N to 22°36'11.88"N Longitude 83°44'27.67"to 83°44'44.07" E). | - | | | | |
| iv. | Elevation of project site the | 445 m | - | | | | |
| v. | Involvement of Forest land if any. | None | - | | | | |
| vi. | Water body exists within the project site as well as study area | Project site: Nil Study area <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Water body</th> <th style="width: 50%;">Distance</th> </tr> </thead> <tbody> <tr> <td>Maini river</td> <td>560 m</td> </tr> </tbody> </table> | Water body | Distance | Maini river | 560 m | Certified Map showing HFL from project site is submitted. |
| Water body | Distance | | | | | | |
| Maini river | 560 m | | | | | | |
| vii. | Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area | None | - | | | | |

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

| S.No. | Name | Proposed Units | |
|-------|------------------------------|-------------------------------|---------------|
| | | Configuration | Configuration |
| 1. | Raw Material Handling System | 2.12 million TPA | - |
| 2. | Sponge Iron Plant | 4 x 350 TPD | 462000 TPA |
| 3. | Steel Melting Shop | 8 x 20 tons induction furnace | 520000 TPA |

| S.No. | Name | Proposed Units | |
|-------|--------------|---|---------------|
| | | Configuration | Configuration |
| | | 2 x 25 tons ladle furnace 2 x 6/11m 2-strand billet caster | |
| 4. | Rolling Mill | 2 x 250000 TPA | 500000 TPA |
| 5. | CPP | 4 x 35 TPH WHRB + 2 x 85 TPH CFBC + 2 x 35 MW STG | 70 MW |

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

| S. No. | Raw Material | Quantity required per annum (TPA) | Source | Distance from site (Kms) | Mode of Transportation |
|--------|----------------------|-----------------------------------|---------------------|--------------------------|------------------------|
| 1. | Iron ore | 874800 | Barbil-Joda | 300 km | Road |
| 2. | Coal for DRI | 435400 | Raigarh-Korba | 80-100 km | Road |
| 3. | Dolomite | 33800 | Bilaspur | 110 km | Road |
| 4. | Coal for Power Plant | 252400 | Raigarh- Korba | 80 – 100 km | Road |
| 5. | Pig iron | 61600 | Raigarh | 80 km | Road |
| 6. | Purchased Scrap | 1,02,400 | Jashpur & Ambikapur | - | Road |
| 7. | Si-Mn | 6200 | Raigarh | 80 km | Road |
| 8. | Fe-Mn | 1000 | Raigarh | 80 km | Road |
| 9. | Lime | 5400 | Raigarh & Bilaspur | 110 km | Road |

28.10.6 The water requirement for the project is estimated as 7200 m³/day, out of which 7200 m³/day of fresh water requirement will be obtained from the Maini river. The permission for drawl of surface water will be obtained from Water Resource dept, Govt of CG. PP has reported that application is under process.

28.10.7 The power requirement of the project is estimated as 70 MW, out of which 70 MW will be obtained from the Captive Power Plant. Additional power, if required, shall be met from Grid. 2 x 1500 KVA DG sets shall be installed to meet the emergency power requirement.

28.10.8 The capital cost of the project is Rs. 610.7 Crores and capital cost for environmental protection measure is proposed as Rs. 20 Crores. The employment generation from the proposed project is 2400.

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

28.10.10 Name of the EIA consultant: M/s Ind Tech House Consult, Delhi [S. No 3, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021]

28.10.11 Proposed Terms of Reference (Baseline data collection period: Winter season, 1st December 2020 to 28th February 2021)

| Attributes | Parameters | Sampling | | Remarks |
|---|--|---------------------------------|----------------------|---------|
| | | No. of stations | Frequency | |
| A. Air | | | | |
| a. Meteorological parameters | Wind speed and direction, Temp & RH | 1 | Hourly for 12 weeks | - |
| b. AAQ parameters | PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , As, Ni Pb in PM ₁₀ and CO | 8 | 24-hrly for 12 weeks | - |
| B. Noise | | | | |
| | dBA Leq, Min-Max | 8 | Once | - |
| C. Water | | | | |
| Ground water quality parameters | basic physico-chemical parameters (cations and anions), main heavy metals (As, Ni, Pb, Hg, Cr. Cd) and coliform count. | 8 | Once | - |
| Surface water quality parameters | basic physico-chemical parameters (cations and anions), main heavy metals (As, Ni, Pb, Hg, Cr. Cd), Conductivity, pH, B, DO, BOD, COD and coliform count | 8 | Once | - |
| D. Land | | | | |
| a. Soil quality b. Land use | physico-chemical parameters (pH, EC, OM, CEC, WHC, SAR), main heavy metals (As, Ni, Pb, Hg, Cr. Cd) and NPK. Land use by satellite imagery | 8 Land use of 10 km area | Once | - |
| E. Biological a. Aquatic b. Terrestrial | Physical survey for flora and fauna in both aquatic and terrestrial environment by Ecology Expert | 2 in 10 km area | Once | - |
| F. Socio-economic parameters | Villages in core zone (2.5 km area around the project site) | 9 villages | Once | - |

Observations of the Committee

28.10.12 The Committee noted the following:

- i. 0.5 MTPA green field ISP with DRI Route (4x350 TPD + 8x20 T IF) and a 70 MW CPP.
- ii. BL data collection has already started from Dec 2020.
- iii. Total land required is 28.82 ha. It is a virgin area.
- iv. 300 kl/hr water shall be drawn from Maini River intake point located 1.5 Km away from the Plant. Application for approval has been submitted.
- v. All incoming and outgoing material shall be transported by road. Total 520 trucks will ply to and from.
- vi. Project implementation shall require 42 months and the project cost is 610.70 Cr.
- vii. Direct hot charging has been envisaged. RHF is also proposed with FO firing during emergency.
- viii. Pet coke use is envisaged in IF for carbon adjustment in the metal.
- ix. LF proposed is electrically heated and has provision for fourth hole extraction for fume extraction.
- x. PM emissions from stacks are committed to be less than 30 mg/Nm³.
- xi. There shall be no effluent discharge as per the documents submitted.
- xii. Water withdrawal from the river is only 0.6 % of lean season flow. Flood plain map of the river shows that the plant is 560 m away from HFL contour. HFL is 440m and the plant is at an elevation of 450 M above MSL.

Recommendations of the Committee

28.10.13 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. Stack emission shall have PM less than 30 mg/Nm³. PTFE bags shall be used.
- ii. No ground water abstraction shall be permitted.
- iii. 85-90% billets shall be directly hot charged and balance through RHF using LDO/FO.
- iv. Plan for Flyash utilization shall be furnished.
- v. CEMS shall be provided on all process stacks and the signal shall be received in plant control room for central control of APCDs installed in the plant.
- vi. Treated waste water shall be reused and recycled.
- vii. All roads in the plant shall be paved and industrial vacuum cleaners shall be used regularly to clean roads to reduce fugitive emissions.
- viii. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression.
- ix. Extensive rain water harvesting shall be practiced in the plant.
- x. Ultralow NOx burner with three stage combustion, flue gas recirculation and auto combustion control system shall be used.
- xi. Flue gases from power plant shall be desulfurized.
- xii. Green belt shall be developed in 33% of the total project area.
- xiii. Provide connectivity details of surroundings of plot, like, approach road /road type, entry gates, parking area, storage and water harvesting and firefighting etc.,

28.11 Establishment of Pelletization plant of 0.8 MTPA, 1x400 TPD & 1 x 600 TPD DRI Kiln to produce Sponge Iron of 3,35,000 TPA, Induction Furnace of 5 x 20 T to produce Hot Billets / M.S. Billets of 3,00,000 TPA, Rolling Mill to produce TMT bars / Rolled products through 3,00,000 TPA, Ferro Alloy plant of 1x12 MVA capacity to produce 40,000 TPA of Fe Mn (or) 30,000 TPA of Si Mn (or) 45,000 TPA of Pig Iron, Power generation through WHRB of DRI Kilns -25 MW & through CFBC of 15 MW by **M/s Gopal Sponge & Power Pvt. Ltd.** located at Chapka Village, Bastar Tehsil, **Bastar District, Chhattisgarh** [Online Proposal No. IA/CG/IND/190950/2021, File No. J- 11011/12/2021-IA.II(I)] – **Prescribing of Terms of Reference** – regarding

28.11.1 M/s Gopal Sponge & Power Pvt. Ltd. has made an application online vide proposal no IA/CG/IND/190950/2021 dated 01/01/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No 3(a) Metallurgical industries (ferrous & nonferrous) under Category “A” of the schedule of the EIA Notification, 2006 and being appraised at Central Level.

Details submitted by Project proponent

28.11.2 The project of M/s Gopal Sponge & Power Pvt. Ltd. located at Khasra numbers 121/3, 121/4, 170, 253/2 & 253/3 of Chapka Village, Bastar Tehsil, Bastar District, Chhattisgarh is for Mini Integrated Steel Plant for establishment of 0.8 mTPA of Pellization plant , 1x400 TPD & 1 x 600 TPD DRI Kilns to produce Sponge Iron of 3,35,000 TPA, Induction Furnace of 5 x 20 T to produce Hot Billets / M.S.Billets of 3,00,000 TPA, Rolling Mill to produce TMT bars / Rolled products through 3,00,000 TPA through Hot Charging, Ferro Alloy plant of 1x12 MVA capacity to produce 40,000 TPA of Fe Mn (or) 30,000 TPA of Si Mn (or) 45,000 TPA of Pig Iron, Power generation through WHRB of DRI Kilns -25 MW & through CFBC of 15 MW.

28.11.3 Environmental site settings

| SN. | Particulars | Details | Remarks |
|-----|---|---|---|
| i | Total land | 46 Acres (18.62 ha.). Out of which 38.7 Acres is already in possession of the management & Agreements entered for rest 7.3 Acres is under process. | Land use: Un-irrigated Agriculture Land |
| ii | Existence of habitation & involvement of R&R, if any. | No rehabilitation and resettlement is required as the proposed project site is not having any habitations. | - |
| iii | Latitude and Longitude of the project site | Latitude - 19°16'33.93"N & Longitude - 81°53'2.76"E | - |
| iv | Elevation of the project site | The MSL of the project site is 546 m & HFL of the Markandi river is 543.160 m above MSL as per the letter given by Office of the Executive Engineer, WRD, Jagdalpur, Bastar District, Chhattisgarh. Hence the project site will not be flooded. | - |

| SN. | Particulars | Details | Remarks |
|-----|--|--|-------------------------|
| v | Involvement of Forest land if any. | - | No forest land involved |
| vi | Water body exists within the project site as well as study area | Markandi River- 250 meters. & Indravati River (7.5 kms.) & Narangi River (8.1 Kms.), Boria nala (0.38 Kms.) are present within 10 Km. radius of the project site. | - |
| vii | Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area | No National park/Wild life sanctuary/ Biosphere reserve/ tiger reserve/ Elephant reserves / Reserved Forests / Protected Forests are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule – I fauna. | - |

28.11.4 The proposed project is a Greenfield project. CTE will be obtained after getting Environment Clearance from MoEF&CC. Consent to Operate will be obtained after getting CTE from CECB, Chhattisgarh.

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

| S. No. | Details | Products | Unit Configuration | Production capacity |
|--------|---|---|------------------------------|---|
| 1. | Pelletization Plant | Pellets | 0.8 MTPA | 0.8 MTPA |
| 2. | DRI Kiln | Sponge Iron | 1 x 400 TPD & 1 x 600 TPD | 3,35,000 TPA |
| 3. | Induction furnace with CCM & LRF | Hot Billets / M.S.Billets | 5 x 20 T | 3,00,000 TPA |
| 4. | Rolling Mill (with 85% Hot charging and 15 % Re-heating with LDO) | Rolled products TMT bars / Angles / Channels | 900 TPD | 3,00,000 TPA |
| 5. | Ferro Alloy Unit | Fe Mn (or) Si Mn (or) Pig Iron | 1 x 12 MVA | Fe Mn 40,000 TPA/ Si Mn 30,000 TPA/ Pig Iron 45,000 TPA |
| 6. | Power generation through WHRB | Electricity | 25 MW | 25 MW |
| 7. | Power generation through CFBC Boiler | Electricity | 15 MW | 15 MW |

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

| Raw Material | Quantity (TPA) | Sources | Mode of Transport |
|--|----------------|---------|-------------------|
| For manufacturing Pellets – 8,00,000 TPA | | | |

| Raw Material | | Quantity (TPA) | Sources | Mode of Transport |
|---|----------|---|--|--|
| Iron ore Concentrate | | 8,96,000 | NMDC, CMDC | By Road (Covered Trucks) |
| Bentonite | | 6,400 | Raipur, Chhattisgarh | By Road (Covered Trucks) |
| Limestone | | 48,000 | Raipur, Chhattisgarh | By Road (Covered Trucks) |
| Coal (Bituminous) | | 8,000 | Raipur, Chhattisgarh | By Road (Covered Trucks) |
| Fuel (Anthracite Coal) | | 35,200 | Raipur, Chhattisgarh | By Road (Covered Trucks) |
| or LDO / LSHS* | | 10600 KL/year | | By Road (in tankers) |
| For manufacturing Sponge Iron – 3,35,000 TPA | | | | |
| Iron Ore (or) Iron ore Pellets | | 5,36,000 (or) 4,69,000 | NMDC, CMDC (or) In-house generation | By rail & road (through covered trucks) By Covered Conveyor |
| Coal | Indian | SECL Chhattisgarh / MCL Odisha | By rail & road (through covered trucks) | By rail & road (through covered trucks) |
| | Imported | Indonesia / South Africa / Australia | Through sea route, rail route & by road | Through sea route, rail route & by road |
| Dolomite | | 16,750 | Raipur, Chhattisgarh | By road (through covered trucks) |
| For manufacturing Hot Metal / MS Billets – 3,00,000 TPA | | | | |
| Sponge Iron | | 3,35,000 | In plant generation | By Conveyor |
| Pig iron / Scrap | | 45,000 | In plant generation / Raipur, Chhattisgarh | By conveyor / By road (through covered trucks) |
| Ferro Alloys | | 18,000 | In plant generation Raipur, Chhattisgarh | By Conveyor By road (through covered trucks) |
| For manufacturing Rolled Products – 3,00,000 TPA | | | | |
| Hot Billets/ MS Billets MS Billets (purchased) | | 3,00,000 17,250 | In house generation Raipur, Chhattisgarh | Covered Conveyor By road (through covered trucks) |
| LDO / LSHS* | | 9810 KL | Raipur, Chhattisgarh | By Road through tanker |
| * 100% consumption in worst-case scenario | | | | |
| For Power Generation –CFBC power plant of 15 MW | | | | |
| Coal | Indian | 72,600 | SECL Chhattisgarh / MCL Odisha | By Rail & Road through covered trucks |
| | Imported | 46,500 | Indonesia / South Africa (vizag port) | Through sea route, rail route & by road |
| Dolochar | | 67,000 | In plant generation / | Covered Conveyor |
| For Ferro Alloys : 1 x 12 MVA [SiMn (or) FeMn (or) Pig Iron] | | | | |
| (i) For manufacturing Silico Manganese - 30,000 TPA | | | | |
| Manganese Ore | | 48,900 | MOIL / OMC | By Rail & Road through covered trucks |
| FeMn Slag | | 18,540 | In house generation | Covered Conveyor |
| LAM Coke | | 11,550 | Dhanbad, jharkand Imported (from Vizag port) | By Road through covered trucks Through sea route, rail route & by road |

| Raw Material | Quantity (TPA) | Sources | Mode of Transport |
|--|----------------|--|--|
| Quartz | 6,000 | Chhattisgarh/ Andra Pradesh | By Rail & Road through covered trucks |
| Bag filter dust | 3,000 | In house generation | Covered conveyer |
| (OR) | | | |
| (ii) For manufacturing Ferro Manganese – 40,000 TPA | | | |
| Manganese Ore | 91,000 | MOIL / OMC | By Rail & Road through covered trucks |
| LAM Coke | 14,600 | Dhanbad, jharkand Imported (from Vizag port) | By Road through covered trucks Through sea route, rail route & by road |
| Quartz | 1,200 | Chhattisgarh/ Andra Pradesh | By Rail & Road through covered trucks |
| Bag filter dust | 6,400 | In house generation | Pipeline |
| (OR) | | | |
| (iii) For manufacturing Pig Iron – 45,000 TPA | | | |
| HG Iron ore | 66,375 | Chhattisgarh/ Orissa | By Rail & Road through covered trucks |
| LAM Coke | 22,050 | Dhanbad, jharkand Imported (from Vizag port) | By Road through covered trucks Through sea route, rail route & by road |
| Lime stone | 18,450 | Chhattisgarh/ MP | By Rail & Road through covered trucks |

- 28.11.7 Water consumption for the proposed project will be 1,600 KLD, which will be met from nearby river. Permission for drawl of water from Water Resources Department of Government of Chhattisgarh will be obtained. The effluent generated from Pellet plant, DRI kilns, Submerged Electric Arc Furnaces, SMS units will be recycled with closed loop cooling water system. Effluent from Rolling Mill will be sent to oil separator followed by settling tank & will be recycled through closed circuit cooling system. Mill scales will be reused in SMS. Sanitary wastewater / sewage generated will be treated in STP. Garland drains will be provided around all the raw material stacking areas. Zero Liquid effluent Discharge system will be maintained in the proposed project.
- 28.11.8 The total power requirement for the proposed project will be about 58 MW, this will be met mainly with captive power plant of 40 MW (i.e. 25 MW WHRB and 15 MW FBC based power plant), remaining 18 MW power will be sourced from the State Grid.
- 28.11.9 Total project cost for proposed project is approx. Rs. 490 Crores and the capital cost for environmental protection measures is proposed as Rs. 28 Crores. Proposed employment generation from proposed project will be 400 nos. through direct employment and 500 nos. through indirect employment.
- 28.11.10 It has been reported that there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.
- 28.11.11 Name of the EIA consultant: M/s Pioneer Enviro Consultants Pvt. Ltd. [S.No. 129, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021].
- 28.11.12 Proposed Terms of Reference (Baseline data collection period: 1st October 2020 to 31st December 2020)

| Attributes | Sampling | | Remarks |
|-------------------------------------|-----------------|---|--|
| | No. of Stations | Frequency | |
| A. Air | | | |
| a. Meteorological parameters | 1 | On hourly basis for one season | <ul style="list-style-type: none"> • Wind Speed • Wind Direction • Temperature • Relative Humidity • Rainfall |
| b. AAQ parameters | 8 | 24 hourly Twice a week for One Season | Parameters Monitored: PM _{2.5} , PM ₁₀ , SO ₂ , NO _x and CO |
| B. Noise | 8 | On hourly basis for 24 Hrs. at each station | Parameters Monitored: <ul style="list-style-type: none"> • Day equivalent • Night equivalent |
| C. Water | | | |
| a. Ground Water | 8 | One sample at each of the locations | Parameters Monitored: as per IS: 10500 |
| b. Surface Water | 5 | One sample at each of the locations | Parameters Monitored: as per BIS: 2296 |
| D. Land | | | |
| a. Soil quality | 8 | One sample at each of the locations | Parameters Monitored: Texture, infiltration rate, SAR bulk density, pH, Ca, Mg, Na, K, Zn, Mn |
| b. Land use | -- | -- | LU map will be prepared by concerned FAE for study area |
| E. Biological | -- | Once in Season | --- |
| a. Aquatic | -- | Once in Season | --- |
| b. Terrestrial | -- | Once in Season | --- |
| F. Socio economic parameters | -- | Once in Season | Social Impact Assessment will be carried out by concerned FAE for study area |

Observations of the Committee

28.11.13 The Committee noted the following:

- i. The proposal is for a green field ISP having pellet plant, DRI kilns, LFs, RM, and FAP to manufacture FeMn, FeSi, and Pig Iron; 25 MW WHRB and 15 MW CFBC.
- ii. Markandi River flows 250 M away from the project site. MSL of project site is 546 M. HFL of the river as per a letter from Executive Engineer WRD Jagdalpur is 543.16m. PP has proposed a 2m high bund towards the river. An order dated 15th Dec from NGT says that a distance of 100 m from the river shall be considered as no development /construction zone. The judgement was for river Ganga.

- iii. Chapka site has been selected after analyzing two more sites i.e., Kundalgaon and Tanakoni.
- iv. Total land requirement is 46 acres and the entire land is unirrigated agriculture land.
- v. 1600 KLD water shall be available from Markandi River.
- vi. Pellet plant shall use pulverized coal as fuel.
- vii. PM emissions shall be less than 30 mg/Nm³.
- viii. Open SAF has been proposed with side extraction hoods for fume control.
- ix. MSW from the plant shall be composted. STP is included to treat the domestic waste water.
- x. There shall be no discharge from the plant.
- xi. 15.2 Acres of land (33%) has been earmarked for GBD.
- xii. Garland drains have been included around stock piles to arrest run off material.
- xiii. Ash generated in pellet plant DRI plant and power house shall be used for brick manufacturing.
- xiv. Project shall be completed in 48 months @ Rs.490 Cr.

Recommendations of the Committee

28.11.14 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. Stack emission shall have PM less than 30 mg/Nm³.
- ii. 4th hole extraction system shall be provided with SAF.
- iii. No ground water abstraction shall be permitted.
- iv. 85-90% billets shall be directly hot charged and balance through RHF using LDO/FO.
- v. FeCr shall not be manufactured in the proposed configuration w/o obtaining EC from MoEF&CC.
- vi. CEMS shall be provided on all process stacks and the signal shall be received in plant control room for central control of APCDs installed in the plant.
- vii. Treated waste water shall be reused and recycled.
- viii. All roads in the plant shall be paved and industrial vacuum cleaners shall be used regularly to clean roads to reduce fugitive emissions.
- ix. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Garland drains shall be constructed around stock yards.
- x. Action plan for rain water harvesting shall be submitted.
- xi. Ultralow NO_x burner with three stage combustion, flue gas recirculation and auto combustion control system shall be used..
- xii. 33% green belt shall be provided with a plant density of 2500 trees per ha. Maximum green belt shall be provided and a 2 M high bund shall be constructed towards the river side.
- xiii. Justification shall be submitted for selection of AAQ monitoring stations. On southern side one AAQ monitoring station shall be installed.

28.12 Modernization cum Expansion of Steel Plant for enhancing hot metal production from 4.500 MTPA to 4.855 MTPA, crude steel production from 4.200 MTPA to 4.850 MTPA and saleable steel production from 3.880 MTPA to 4.325 MTPA by installing coke oven battery#7,

steel melting shop#3, new normalizing furnace in new plate mill, new oxygen plant and natural gas pipe line network inside the existing plant premises and adopting technological measures in existing blast furnaces for enhancing hot metal production by **M/s. Steel Authority of India Limited - Rourkela Steel Plant**, located at Village and Tehsil Rourkela, **District Sundergarh, Odisha**. [Online Proposal No. IA/OR/IND/190544/2020, File No. J-11011/66/2014-IA.II(I)] – **Prescribing of Terms of Reference** – regarding

28.12.1 M/s. SAIL - Rourkela Steel Plant (RSP) has made an application online vide proposal no IA/OR/IND/190544/2020 dated 01/01/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No 3(a) Metallurgical industries (ferrous & nonferrous) & 4(b) Coke oven plants under Category “A” of the schedule of the EIA Notification, 2006 and being appraised at Central Level.

Details submitted by Project proponent

28.12.2 The project of M/s SAIL - Rourkela Steel Plant (RSP) located in Rourkela Village and Tehsil, Sundargarh District, Odisha State is for enhancement of production of Hot Metal production from 4.500 MTPA to 4.855 MTPA, Crude Steel production from 4.200 MTPA to 4.850 MTPA and Saleable Steel production from 3.880 MTPA to 4.325 MTPA.

28.12.3 Environmental site settings

| SN. | Particulars | Details | Remarks |
|-----|---|--|--|
| i | Total land | 1940.22 ha. – Own land – area of existing steel plant premises. | Land use – Industrial land |
| ii | Existence of habitation & involvement of R&R, if any. | No habitation and hence no R&R | Expansion will be within existing plant boundary |
| iii | Latitude and Longitude of the project site | Coke Oven Battery site is located within 22° 12’ 30.5” to 22° 12’ 20.7” North latitude and 84° 51’ 51.7” to 84° 52’ 31.83” East longitude just adjacent to Coke Oven Battery No. 6. Others are in the existing units within steel plant premises. | - |
| iv | Elevation of the project site | 200 - 219 m MSL | - |
| v | Involvement of Forest land if any. | - | No forest land involved |
| vi | Water body exists within the project site as well as study area | Project site: No water body within the project site. Study area: (within 10 km radius) River Brahmani, River Sankh & River Koel | - |
| vii | Existence of | None of them exist in the study area | - |

| SN. | Particulars | Details | Remarks |
|-----|---|---------|---------|
| | ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area | | |

28.12.4 The existing project was accorded environmental clearance vide letter no. J-11011/757/2007-IA II(I) dated 29/01/2008, J-11011/66/2014-IA II(I) dated 15/12/2016 and J-11011/66/2014-IA II(I) dated 06/11/2019. Consent to Operate for the existing unit was accorded by Odisha State Pollution Control Board vide ref. no. 3442/IND-1/CON-01, dated 18/03/2020. The validity of CTO is up to 31/03/2021.

28.12.5 Implementation status of the existing EC

| SN. | Facilities | Units | As per EC dated | Implementation Status as on 12.01.2021 | Production as per CTO, MTPA |
|--|--|---------------------|-----------------|--|----------------------------------|
| EC ref. no. J-11011/757/2007- IA II(I) dated 29/01/2008 | | | | | |
| 1 | Coke Ovens along with By-product recovery plant | 6 | 29.01.08 | Completed and under operation | 2.170 |
| 2 | Sinter Plant | 3 | 29.01.08 | Completed and under operation | 6.760 |
| 3 | Blast Furnace | 3 | 29.01.08 | Completed and under operation | 4.500 |
| 4 | Steel Melt Shops | 2 | 29.01.08 | Completed and under operation | 4.200 |
| 5 | Rolling Mills – Saleable steel | Details given below | 29.01.08 | Completed and under operation | 3.880 |
| 6 | Hot Strip Mill | 1 | 29.01.08 | Completed and under operation | 1.850 |
| 7 | Plate Mill | 2 | 29.01.08 | Completed and under operation | 1.530 |
| 8 | Cold Rolling Mill CR coils CR sheets Galv. Sheets Tin plates | 1 | 29.01.08 | Completed and under operation | 0.345 0.025 0.196 0.075 |
| 9 | ERW Pipe Plant | 1 | 29.01.08 | Completed and under operation | 0.075 |
| 10 | Spiral Welded Pipe Plant | 1 | 29.01.08 | Completed and under operation | 0.055 |

| SN. | Facilities | Units | As per EC dated | Implementation Status as on 12.01.2021 | Production as per CTO, MTPA |
|-----|-----------------------|-------|-----------------|--|-----------------------------|
| 11 | Silicon Steel Complex | 1 | 29.01.08 | Completed and under operation | 0.255 |
| 12 | Lime & Dolo Plant | 2 | 29.01.08 | Completed and under operation | 0.415 0.130 |

| SN. | Facilities | Units | As per EC dated | Implementation Status as on 12.01.2021 | Production as per CTO, MTPA |
|--|--|------------------------|-----------------|--|----------------------------------|
| EC ref. no. J-11011/66/2014-IA II(I) dated 15/12/2016 | | | | | |
| 1 | Coke Ovens along with By-product recovery plant | 6 | 15.12.16 | Completed and under operation | 2.170 |
| 2 | Sinter Plant (Sinter) | 3 | 15.12.16 | Completed and under operation | 6.760 |
| 3 | Blast Furnace | 3 | 15.12.16 | Completed and under operation | 4.500 |
| 4 | Steel Melt Shops | 2 | 15.12.16 | Completed and under operation | 4.200 |
| 5 | Rolling Mills – Saleable steel | Details as given below | 15.12.16 | Completed and under operation | 3.880 |
| 6 | Hot Strip Mill | 1 | 15.12.16 | Completed and under commissioning. | 3.000 |
| 7 | Plate Mill | 2 | 15.12.16 | Completed and under operation | 1.530 |
| 8 | Cold Rolling Mill CR coils CR sheets Galv. Sheets Tin plates | 1 | 15.12.16 | Completed and under operation | 0.345 0.025 0.196 0.075 |
| 9 | ERW Pipe Plant | 1 | 15.12.16 | Completed and under operation | 0.075 |
| 10 | Spiral Welded Pipe Plant | 1 | 15.12.16 | Completed and under operation | 0.055 |
| 11 | Silicon Steel Complex | 1 | 15.12.16 | Completed and under operation | 0.255 |
| 12 | Lime & Dolo Plant | 2 | 15.12.16 | Completed and under operation | 0.415 0.130 |
| 13 | Beneficiation Plant | 1 | 15.12.16 | Awaiting for financial sanction | - |
| 14 | Pellet Plant | 1 | 15.12.16 | Awaiting for financial sanction | - |

| SN. | Facilities | Units | As per EC dated | Implementation Status as on 12.01.2021 | Production as per CTO, MTPA |
|-----|---------------------|-------|-----------------|--|-----------------------------|
| 15 | Special Plate Plant | 1 | 15.12.16 | Completed and under operation | 0.015 |

| SN. | Facilities | Units | As per EC dated | Implementation Status as on 12.01.2021 | Production as per CTO, MTPA |
|--|--|------------------------|-----------------|--|----------------------------------|
| EC ref. no. J-11011/66/2014-IA II(I) dated 06/11/2019 | | | | | |
| 1 | Coke Ovens No. of ovens Gross coke | 6 | 06.11.19 | Completed and under operation | 2.170 |
| 2 | Sinter Plant (Sinter) | 3 | 06.11.19 | Completed and under operation | 6.760 |
| 3 | Blast Furnace – Hot metal Production | 3 | 06.11.19 | Completed and under operation | 4.500 |
| 4 | Steel Melt Shops – Crude steel Caster#4 | 2 1 | 06.11.19 | Completed and under operation Under tendering | 4.200 |
| 5 | Rolling Mills – Saleable steel | Details as given below | 06.11.19 | Completed and under operation | 3.880 |
| 6 | Hot Strip Mill – Hot Rolled Steel | 1 | 06.11.19 | Completed and under operation | 3.000 |
| 7 | Plate Mill - Plates | 2 | 06.11.19 | Completed and under operation | 2.135 |
| 8 | Cold Rolling Mill CR coils CR sheets Galv. Sheets Tin plates | 1 | 06.11.19 | Completed and under operation | 0.345 0.025 0.196 0.075 |
| 9 | Silicon Steel Mill – CRNO Steel | 1 | 06.11.19 | Completed and under operation | 0.255 |
| 10 | ERW Pipe Plant | 1 | 06.11.19 | Completed and under operation | 0.075 |
| 11 | Pipe Plant - Spiral Welded Pipe ERW Pipes | 1 | 06.11.19 | Completed and under operation | 0.055 0.075 |
| 12 | LDBP – Lime : Dolo : | 2 | 06.11.19 | Completed and under operation | 0.415 0.130 |
| 13 | Beneficiation Plant | 1 | 06.11.19 | Awaiting for financial sanction | 3.300 |
| 14 | Pellet Plant | 1 | 06.11.19 | Awaiting for financial sanction | 2.000 |

| SN. | Facilities | Units | As per EC dated | Implementation Status as on 12.01.2021 | Production as per CTO, MTPA |
|-----|----------------------|-------|-----------------|--|-----------------------------|
| 15 | Special Plate Plant | 1 | 06.11.19 | Completed and under operation | 0.015 |
| 16 | Sulphuric Acid Plant | 1 | 06.11.19 | Completed and under commissioning | 125 TPD |

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

| SN. | Name | Existing Units | | Proposed Units | | Total (Existing +Proposed) | |
|-----|--|--------------------------------------|---------------------------|---|------------------------------------|---------------------------------------|--------------------------|
| | | Configuration | Production MTPA | Configuration | Production MTPA | Configuration | Production MTPA |
| 1 | Coke Ovens along with | 6 Coke Batteries 437 no. of Ovens | 2.170 | 1 New Battery (COB#7) 92 Ovens | 0.770 | 7 Coke Batteries. 529 no. of Ovens | 2.940 |
| | By-product recovery plant | BPTG from CDCP | 6.4 MW | BPTG | 5.0 MW | 2 BPTGs | 11.4 MW |
| | | Tar Sulphur | 0.097 1220 TPA | Tar Sulphur | 0.037 1220 TPA | Tar Sulphur | 0.134 2440 TPA |
| 2 | Sinter Plant (Sinter) | #1 + #2 + #3 | 1.5 + 1.57 + 3.706 | No change | No change | #1 + #2 + #3 | 1.5 + 1.57 + 3.706 |
| 3 | Blast Furnace – Hot metal Production | BF#1, #4 & #5 | 4.500 | No change but Adopting technological measures | 0.355 | BF#1, #4 & #5 | 4.855 |
| 4 | Steel Melt Shops – Crude steel - BOFs | SMS#1 & #2 5 | 4.200 2x66T+ 3x150T | SMS#3 instead of SMS#1 1x150 BOF | 1.150 in place of 0.500 | SMS#1 & #3 4 x 150 T | 4.850 |
| | Continuous Slab Casters | 5 | 4.200 | 1 in place of old | 1.150 | 5 | 4.850 |
| | Ladle heating furnaces | 5 | 1x66 T + 4x150 T | 1 in place of old | 1x150 T in place of 66 T caster | 5 | 5 x 150T |
| | RH-OB | 1 | 1x150T | 1 | 1x 150 | 2 | 2 x 150 T |
| | Hot Metal Desulphurisation | 2 nos. | - | 1 in place of old | - | 2 | - |
| | Micro pelletisation for ferruginous wastes | - | - | 1 | 0.1800 | - | 0.180 |

| SN. | Name | Existing Units | | Proposed Units | | Total (Existing +Proposed) | |
|-----|--|------------------------|-------------------|--|--------------------------------|----------------------------|---------------------------------|
| | | Configuration | Production MTPA | Configuration | Production MTPA | Configuration | Production MTPA |
| 5 | Rolling Mills – Saleable steel | Details as given below | 3.880 | Details as given below | Details as given below | Details as given below | 4.325 |
| 6 | Hot Strip Mill – Hot Rolled Steel | 1 | 3.000 | No change | No change | 1 | 3.000 |
| 7 | Plate Mill – Plates Normalizing Furnace | 2 2 | 1.530 | No change 1 | No change | 1 3 | 1.530 |
| 8 | Cold Rolling Mill CR coils CR sheets Galv. Sheets Tin plates | 1 | 0.641 | No change | No change | 1 | 0.641 |
| 9 | Silicon Steel Mill – CRNO Steel | 1 | 0.255 | No change | No change | 1 | 0.255 |
| 10 | ERW Pipe Plant | 1 | 0.075 | No change | No change | 1 | 0.075 |
| 11 | Pipe Plant - Spiral Welded Pipe ERW Pipes | 1 | 0.055 | No change | No change | 1 | 0.055 |
| 12 | LDBP – Lime : Dolo : | 7 VSKs | 0.4149 0.130 | Lime: 1 in place of old VSK Dolo: 1 | 300 TPD 150 TPD | 8 VSKs | Lime = 0.52 Dolo = 0.18 |
| 13 | Beneficiation Plant | 1 | 3.300 | No change | No change | 1 | 3.300 |
| 14 | Pellet Plant | 1 | 2.000 | No change | No change | 1 | 2.000 |
| 15 | Special Plate Plant | 1 | 0.015 | No change | No change | 1 | 0.015 |
| 16 | Sulphuric Acid Plant | 1 | 125 TPD | No change | No change | 1 | 125 TPD |
| 17 | Oxygen Plant | 1 | 2x180T + 700 T | 1 | 1x 1000 T | 2 | 2x180 T 1x700 T 1 x 1000T |
| 18. | Natural gas grid | - | - | 1 | 32100 Nm ³ /hour | 1 | 32100 Nm ³ /hour |

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

| SN. | Raw Material | Quantity required per annum | | | Source | Distance from site (Kms) | Mode of Transportation |
|-----|--------------|-----------------------------|-----------|-------|-----------------------------|--------------------------|------------------------|
| | | Existing | Expansion | Total | | | |
| 1 | Coking coal | 2.793 | 1.02 MTPA | 3.813 | Existing indigenous sources | 250 – 340 kms | Rail |

- 28.12.8 As per the existing ECs dated 29/01/2008 & 15/12/2016, the water drawl permitted from river is 2,27,352 m³/day. No additional water drawl from river is required for the proposed project. The water requirement of the project is estimated as 21,240 m³ /day. This water requirement will be met by recycling the effluent after proper treatment under ZLD. RSP is drawing water from the captive pick up weir constructed across river Brahmani at Tarkera. For maintaining water level at pickup weir, RSP is releasing water from RSP's captive reservoir at Mandira by constructing dam across river Sankh. RSP is maintain the Reservoir and Dam at Mandira and pick weir at Tarkera.
- 28.12.9 The power requirement for the project is estimated as 109 MW which will be obtained from the Captive generation & Grid
- 28.12.10 The capital cost of the project is Rs 5529.48 Crores and the capital cost for environmental protection measures is proposed as Rs 553 Crores. The employment generation from the proposed expansion is 2615.
- 28.12.11 There is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration
- 28.12.12 Name of the EIA consultant: M/s M. N. Dastur & Co (P) Limited [S.No. 168, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021]
- 28.12.13 Proposed Terms of Reference (Baseline data collection period: December 2019 to February 2020)

| Attributes | Sampling | | Remarks |
|---|--|---|---|
| | No. of stations | Frequency | |
| A. Air | | | - |
| a. Meteorological parameters | 1 | 90 days | temperature, relative humidity, cloud cover, rainfall, wind speed, wind direction |
| b. AAQ parameters | 8 | twice a week on 24 hrs basis for a total duration of 12 weeks | PM ₁₀ , PM _{2.5} , SO ₂ , NO _x , CO, O ₃ , NH ₃ , C ₆ H ₆ , BaP, Pb, As, and Ni |
| B. Noise | 8 | Leq for day time and night time for one day | Around the plant boundary |
| C. Water | | | |
| Surface water/Ground water quality parameters | 8 for surface & 8 for ground water | monthly once for one season | - |
| D. Land | | | |
| a. Soil quality b. Land use | 3 Study area of 10 km aerial coverage | Once in a study period | - |
| E. Biological a. Aquatic b. Terrestrial | 8 8 | Once in a study period | - |

| Attributes | Sampling | | Remarks |
|------------------------------|-------------------------------------|------------------------|---------|
| F. Socio-economic parameters | Study area of 10 km aerial coverage | Once in a study period | - |

Observations of the Committee

28.12.14 The Committee noted the following:

- i. The proposal is for expansion and modernization of Rourkela Steel Plant @ Rs 5529.48 Cr.
- ii. Water requirement for expansion shall 885 Cum/hr and the same shall be drawn from existing lagoon and from treated effluent streams. No additional water shall be drawn from the river.
- iii. New BOD Plant of 60 cum/hr capacity for Coke Ovens is being proposed. The treatment plant shall be equipped with MBBR and RO to treat effluent to meet recyclable quality.
- iv. Part of the existing facilities shall be dismantled to accommodate new and modernized facilities. No additional land is required for expansion.
- v. Status of compliance to the conditions of existing EC of 2016 has been furnished.
- vi. Project completion period is 57 Months.

Recommendations of the Committee

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

- i. Tar sludge and BOD plant sludge shall be recycled to coke ovens.
- ii. Treated water from BOD Plant shall be recycled and reused.
- iii. Coal/coke fines, BOF sludge, scale from CCM, and the dust collected from bag houses shall be converted to micro pellets and recycled to sinter plant.
- iv. PLL, PLD, PLO, charging and pushing emissions and stack emissions from coke ovens shall meet the prevailing standards prescribed by MoEF&CC.
- v. Dog House and secondary fume extraction system shall be provided for BOF converter.
- vi. CDQ shall be installed for coke cooling.
- vii. CEMS shall be provided on all process stacks and the signal shall be received in plant control room for central control of APCDs installed in the plant.
- viii. 33 % of the total project area shall be converted into green belt.
- ix. Action plan for 100 % solid waste utilization shall be submitted.
- x. Treated waste water shall be reused and recycled.
- xi. All roads in the plant shall be paved and industrial vacuum cleaners shall be used regularly to clean roads to reduce fugitive emissions.
- xii. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression.
- xiii. Extensive rain water harvesting shall be practiced in the plant.
- xiv. Ultralow NOx burner with three stage combustion, flue gas recirculation and auto combustion control system shall be used.

28.13 Proposed expansion of Steel Plant – DRI Kiln (Sponge Iron from 1,15,000 TPA to 3,46,500 TPA), Induction Furnaces with matching LRF & CCM (MS Billets / Ingots from 30,000 TPA to 3,46,800 TPA), Rolling Mill with hot charging (Rolled Products 30,000 TPA to 2,90,000 TPA), New Rolling Mill with Conventional with LDO (Rolled Products 30,000 TPA), New Ferro Alloy Unit with 2x18 MVA Submerged Electric Furnaces (FeMn 90,000 TPA/SiMn 60,000 TPA / FeCr 60,000 TPA / FeSi 30,000 TPA/Pig Iron – 90,000 TPA /Cast iron – 90,000 TPA), WHRB based Power Plant from 12 MW to 34 MW, CFBC based Power Plant 4.9 MW to 29.9 MW & New Fly Ash brick manufacturing unit (38,000 Bricks/day) by **M/s Sunil Ispat and Power Limited** located at Chiraipani Village, Lakha Gram Panchayat, **Raigarh Tehsil & District, Chhattisgarh** [Online Proposal No. IA/CG/IND/187476/2020, File No. File No. J- 11011/13/2021-IA.II(I)] – **Prescribing of Terms of Reference** – regarding.

28.13.1 M/s Sunil Ispat and Power Limited has made an application online vide proposal no IA/CG/IND/187476/2020 dated 02/01/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No 3(a) Metallurgical industries (ferrous & nonferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by Project proponent

28.13.2 The project of M/s Sunil Ispat and Power Limited located Chiraipani Village, Lakha Gram Panchayat, Raigarh Tehsil & District, Chhattisgarh is for expansion of Steel Plant – DRI Kiln (Sponge Iron from 1,15,000 TPA to 3,46,500 TPA), Induction Furnaces with matching LRF & CCM (MS Billets / Ingots from 30,000 TPA to 3,46,800 TPA), Rolling Mill with hot charging (Rolled Products 30,000 TPA to 2,90,000 TPA), New Rolling Mill with Conventional with LDO (Rolled Products 30,000 TPA), New Ferro Alloy Unit with 2x18 MVA Submerged Electric Furnaces (FeMn 90,000 TPA/SiMn 60,000 TPA / FeCr 60,000 TPA / FeSi 30,000 TPA/Pig Iron – 90,000 TPA /Cast iron – 90,000 TPA), WHRB based Power Plant from 12 MW to 34 MW, CFBC based Power Plant 4.9 MW to 29.9 MW & New Fly Ash brick manufacturing unit (38,000 Bricks/day).

28.13.3 Environmental site settings

| SN. | Particulars | Details | Remarks |
|-----|---|--|---|
| i | Total land | Existing plant is having 21.57 ha (i.e. 53.32 acres) of land. | Proposed expansion will be taken up in existing plant. |
| ii | Existence of habitation & involvement of R&R, if any. | The nearest habitation to plant is Kelo priyotoma Colony which is at distance of 0.3 Kms. which is a rehabilitated village due to DilipSingh JudevMega Pariyojana (water Reservoir) and Chairaipani at a distance of 350 m from the boundary of the plant and 450 m from the unit in the southern direction No R&R envisaged. | Due to proximity to habitation: PP will develop 30 m wide greenbelt with tall trees towards Kelo priyotoma Colony in the Eastern direction and towards chiraipani village in the Southern direction inside the plant premises. |

| SN. | Particulars | Details | Remarks |
|-----|--|--|---|
| iii | Latitude and Longitude of the project site | 21°58'50.10"N to 21°58'59.83"N latitudes and 83°21'52.89"E to 83°22'13.23"E longitudes. | - |
| iv | Elevation of the project site | 253 m to 263 m MSL | - |
| v | Involvement of Forest land if any. | No forest land involved | Certificate form DFO Raigarh obtained vide letter dated 23/12/2020. |
| vi | Water body exists within the project site as well as study area | Kelo river (1.5 Kms.) and DilipSingh JudevMega Pariyojana (Water Reservoir) (1.1 Kms.) are present within 10 Kms. of plant site. | - |
| vii | Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area | Urdana RF, Taraimal RF, Punjipathra PF, Barkachhar RF, Kharidungri PF, Dungapani PF, Lamidarha PF, Rabo RF exists within the study area. No National park/Wild life sanctuary/Biosphere reserve/tiger reserve/Elephant coridor are reported to be located in the core and buffer zone of the plant. Movement of Elephants is observed within 15 Kms. radius of the plant, as per the secondary source. | - |

28.13.4 The existing plant was accorded Consent to Establish from Chhattisgarh Environment Conservation Board for 1x350 TPD DRI Kiln vide Consent Order No. 236/TS/CECB/2005 date 12/01/2005 which was granted prior to EIA notification 2006. PP has further submitted that as per EIA notification 1994 also EC is not applicable as investment is 32.0 crores which is less than Rs 100 Crores for greenfield projects. Subsequently 1st Consent to Operate obtained from Chhattisgarh Environment Conservation Board vide consent order No. TS/CECB/2009 date 03/01/2009 and Consent to Operate is regularly being renewed from CECB and the latest CTO is valid up to 26/02/2022. Company has obtained Consent to Establish from Chhattisgarh Environment Conservation Board for manufacturing of 30,000 TPA of MS Billets through Induction Furnace, 30,000 TPA of Rolled products through hot charge Rolling mill, Power generation of 12 MW by WHRB based and 4.9 MW by AFCB based in the existing plant premises vide consent order No.5592/TS/CECB/2020 Nava Raipur, Atal Nagar, Raipur, Date 28/09/2020.

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

| S.No. | Units (Product) | Existing plant in operation | Obtained CTE from CECB (work yet to commence) | Proposed Expansion Proposal | After Proposed Expansion Proposal | |
|-------|---|-----------------------------|---|---|--|---------|
| 1. | DRI Kilns (Sponge Iron) | 1,15,000 TPA (1 x 350 TPD) | | Production increase from 1,15,000 TPA to 1,32,000 TPA (by usage of Pellets & increase in number of Working Days 330) & 2,14,500 TPA (1 x 650 TPD) | 3,46,500 TPA | |
| 2. | Induction Furnace (MS Billets / Ingots / Hot Billets) | | 30,000 TPA (2 x 6 T) | 3,16,800 TPA (4 x 30 T) | 3,46,800 TPA | |
| 3. | Rolling Mill with Hot Charging (Rolled Products) | | 30,000 TPA (1 x 90 TPD) | 2,60,000 TPA (1 x 787 TPD) | 3,20,000 TPA | |
| 4. | Reheating Furnace (Rolled products) with LDO as fuel | -- | | 30,000 TPA (1 x 90 TPD) | | |
| 5. | Ferro Alloys (FeMn / SiMn / FeCr / FeSi / Pig Iron / Cast Iron) | -- | | FeMn 90,000 TPA / SiMn 60,000 TPA / FeCr – 60,000 TPA / FeSi – 30,000 TPA/ Pig iron – 90,000 TPA / Cast iron 90,000 TPA (2 x 18 MVA) | FeMn 90,000 TPA / SiMn 60,000 TPA / FeCr – 60,000 TPA / FeSi – 30,000 TPA/ Pig iron – 90,000 TPA / Cast iron 90,000 TPA (2 x 18 MVA) | |
| 6. | Power Plant | WHRB | -- | 1 x 12 MW | 1 x 22 MW | 63.9 MW |
| | | FBC | -- | 1 x 4.9 MW (AFBC) | 1 x 25 MW (CFBC) | |
| 7. | Fly Ash brick manufacturing unit (Bricks) | -- | | 38,000 Bricks/day | 38,000 Bricks/day | |

28.13.6 Proposed raw material and fuel requirement for expansion project are Iron Ore, Dolomite, Manganese ore, Chrome ore, Quartz, Coal, Coke, etc., The following is the raw material requirement for the propose expansion project:

| S.No. | Raw Material | Quantity (TPA) | Sources | Distance in Kms | Mode of Transport | |
|--------------------------|---|----------------|--------------------------------------|--------------------------------|---|---|
| 1. | For DRI Kilns (Sponge Iron) – 2,14,500 TPA | | | | | |
| a) | Iron ore (100%) | 3,43,200 | Odisha/ Chhattisgarh | 300 | By rail & road (through covered trucks) | |
| b) | Co al | India n | 2,78,850 | SECL Chhattisgarh / MCL Odisha | 200 | By rail & road (through covered trucks) |
| | | (or) | | | | |
| | Impor ted | 1,78,464 | Indonesia / South Africa / Australia | 20 | Through sea route, rail route & by road | |
| c) | Dolomite | 10,725 | Chhattisgarh | 100 | By road (through covered trucks) | |
| 2. | For Steel Melting Shop (MS Billets/ Ingots/Hot Billets) – 3,16,800 TPA | | | | | |
| a) | Sponge Iron | 3,20,000 | Own generation | --- | --- | |
| b) | MS Scrap / Pig Iron | 48,000 | Own generation/ Chhattisgarh | 100 | By road (through covered trucks) | |
| c) | Ferro alloys | 16,000 | Own generation | --- | --- | |
| 3. | For Rolling Mill through Hot charging (Rolled Products) – 2,60,000 TPA | | | | | |
| a) | Hot Billets | 2,85,681 | Own generation | --- | --- | |
| 4. | For Rolling Mill (Rolled Products) – 30,000 TPA with LDO | | | | | |
| a) | MS Billets /Ingots | 31,800 | Own generation | --- | --- | |
| b) | LDO | 1595 KL/Annum | From oil depots, raigarh | Upto 200 | By tanker | |
| 5. | For CFBC Boiler [Power Generation 1 x 25 MW] | | | | | |
| a) | Indian Coal (100 %) | 1,48,500 | SECL Chhattisgarh / MCL Odisha | Upto 200 | By rail & road (through covered trucks) | |
| | OR | | | | | |
| | Imported Coal (100 %) | 1,00,000 | Indonesia / South Africa / Australia | 20 | Through sea route, rail route & by road | |
| | OR | | | | | |
| | Dolochar + Indian Coal | Doloch ar | 69,300 | In plant generation | --- | through covered conveyors |
| | | Indian Coal | 1,13,850 | SECL Chhattisgarh / MCL Odisha | Upto 200 | By rail & road (through covered trucks) |
| OR | | | | | | |
| Dolochar + Imported Coal | Doloch ar | 69,300 | In plant generation | --- | through covered conveyors | |
| | Importe d Coal | 72,864 | Indonesia / South Africa / Australia | 20 | Through sea route, rail route & by road | |
| 6. | For Ferro Alloys (2 x 18 MVA) | | | | | |
| 6 (i) | For Ferro Manganese –90,000 TPA | | | | | |
| a) | Manganese Ore | 2,04,750 | Chhattisgarh /Odisha/ Andhra Pradesh | Up to 600 | By road (through covered trucks) | |
| b) | LAM Coke | 32,850 | Andhra Pradesh | Up to 600 | By road (through covered trucks) | |
| c) | Quartz | 2,700 | Andhra Pradesh | Upto 600 | By road | |

| S.No. | Raw Material | Quantity (TPA) | Sources | Distance in Kms | Mode of Transport |
|---------|-----------------------------------|----------------|-------------------------------|-----------------|---|
| | | | | | (through covered trucks) |
| d) | Bag filter dust | 14,400 | Inhouse Generation | --- | Through covered conveyers |
| (OR) | | | | | |
| 6 (ii) | For Silico Manganese – 60,000 TPA | | | | |
| a) | Manganese Ore | 97,800 | MOIL / OMC | Upto 500 | By Rail & Road (through covered trucks) |
| b) | FeMn Slag | 37,080 | Inhouse Generation | --- | --- |
| c) | LAM Coke | 23,100 | Andhra Pradesh | Up to 600 | By road (through covered trucks) |
| d) | Quartz | 12,000 | Andhra Pradesh | Up to 600 | By road (through covered trucks) |
| e) | Bag filter dust | 6,000 | Inhouse Generation | --- | Through covered conveyers |
| (OR) | | | | | |
| 6 (iii) | For Ferro Chrome – 60,000 TPA | | | | |
| a) | Chrome Ore | 1,20,000 | MOIL / OMC | Upto 600 | By Rail & Road (through covered trucks) |
| b) | LAM Coke | 19,800 | Andhra Pradesh | Upto 600 | By road (through covered trucks) |
| c) | Quartz | 1,200 | Chhattisgarh / Andhra Pradesh | Upto 600 | By road (through covered trucks) |
| d) | Lime | 1,500 | Chhattisgarh / Andhra Pradesh | Upto 600 | By road (through covered trucks) |
| e) | Molasses | 1,500 | Chhattisgarh / Andhra Pradesh | Upto 600 | By road (through covered trucks) |
| f) | Bag filter dust | 2,100 | In house generation | --- | Through covered conveyers |
| (OR) | | | | | |
| 6 (iv) | For Ferro Silicon – 30,000 TPA | | | | |
| a) | Quartz | 91,200 | Chhattisgarh / Andhra Pradesh | Upto 600 | By road (through covered trucks) |
| b) | Mill Scale | 45,600 | Inhouse Generation | ---- | -- |
| c) | M.S. Scrap | 23,400 | Chhattisgarh / Andhra Pradesh | Upto 600 | By road (through covered trucks) |
| d) | LAM Coke | 1,050 | Andhra Pradesh | Upto 600 | By road (through covered trucks) |
| e) | Bag filter dust | 16,800 | Inhouse Generation | --- | Through covered conveyers |
| (OR) | | | | | |
| 6(v) | For Pig iron – 90,000 TPA | | | | |
| a) | Iron Ore / Sinter | 1,64,285 | Odisha/ Chhattisgarh | Upto 350 | By road (through covered trucks) |
| b) | LAMCoke | 76,785 | Andhra Pradesh | Upto 600 | By road (through covered trucks) |
| c) | Limestone | 10,714 | Chhattisgarh | Upto 200 | By road (through covered trucks) |
| d) | Quartz | 5,357 | Chhattisgarh / Andhra Pradesh | Upto 600 | By road (through covered trucks) |
| (OR) | | | | | |
| 6(vi) | For cast iron – 90,000 TPA | | | | |
| a) | Iron Ore / Sinter | 1,64,285 | Odisha/ Chhattisgarh | Upto 350 | By road (through covered trucks) |
| b) | LAMCoke | 76,785 | Andhra Pradesh | Upto 600 | By road |

| S.No. | Raw Material | Quantity (TPA) | Sources | Distance in Kms | Mode of Transport |
|-------|--|----------------|----------------------------------|-----------------|-------------------------------------|
| | | | | | (through covered trucks) |
| c) | Limestone | 10,714 | Chhattisgarh | Upto 200 | By road (through covered trucks) |
| d) | Quartz | 5,357 | Chhattisgarh / Andhra Pradesh | upto600 | By road (through covered trucks) |
| 7 | Brick Manufacturing unit – 38,000 per day | | | | |
| a) | Ash | 26,600 | Own generation | --- | -- |
| b) | Stone dust | 5,700 | Chhattisgarh | Upto 200 | By road (through covered trucks) |
| c) | Cement | 3,800 | Chhattisgarh | Upto 200 | By road (through covered trucks) |
| d) | Gypsum | 1,900 | Chhattisgarh | Upto 200 | By road (through covered trucks) |

- 28.13.7 Water required for existing plant & units for which Consent obtained (yet to commence) is 267 KLD and same being sourced from Ground Water source. This includes make up water for DRI Kiln, Induction Furnace, Rolling Mill, Power Plant and Domestic. Water required for the proposed expansion project will be 1346 KLD and same will be sourced from Kelo river. This includes make up water for DRI Kiln, Induction Furnace, Rolling Mill, Ferro Alloys, Power Plant, Fly ash brick manufacturing unit and Domestic. Water drawl permission from Water Resource Department Chhattisgarh will be obtained after receipt of TOR letter for proposed expansion. Air cooled condensers will be provided CFBC Power plant.
- 28.13.8 The project proponent has submitted that there will be no effluent discharge in the Sponge Iron, Induction Furnace, Ferro Alloys unit as closed-circuit cooling system will be adopted. Effluent from Rolling Mill will be sent to settling tank & will be recycled through closed circuit cooling system. Air Cooled condensers will be provided in the power plant, which will be reduce the water consumption significantly. Hence wastewater generation will also be minimized. Effluent from power plant will be treated in ETP and after ensuring compliance with CECB norms, it will be utilized for dust suppression, ash conditioning and for greenbelt development. During monsoon period, the treated effluent will be utilized as makeup water for Rolling Mill. Sanitary waste water will be treated in STP.
- 28.13.9 Power required for the existing plant sponge iron plant is 1.9 MW and is being sourced from State Grid and power required for IF, Rolling mill and power plant for which CTE obtained will be 5.3 MW and Power required for the proposed expansion project will be 81.0 MW which will be sourced from State Grid & Captive Power Plant.
- 28.13.10 The capital cost of the project is Rs. 602.5 Crores. The employment generation from the proposed expansion is 250.
- 28.13.11 It has been reported that there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration
- 28.13.12 Name of the EIA consultant: M/s Pioneer Enviro Consultants Pvt. Ltd. [S.No. 129, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021].
- 28.13.13 Proposed Terms of Reference (Baseline data collection period: 1st October, 2020 to 31st December, 2020)

| Attributes | Sampling | | Remarks |
|---|-------------------------------------|---|--|
| | No. of stations | Frequency | |
| A. Air | | | - |
| a. Meteorological parameters | 1 | 90 days | temperature, relative humidity, cloud cover, rainfall, wind speed, wind direction |
| b. AAQ parameters | 8 | 2 days a week for 3 months | PM _{2.5} , PM ₁₀ , SO ₂ , NO _x & CO |
| B. Noise | 8 | Hourly equivalent noise levels One day in Study period | Within the study zone of the plant. The impact of Noise levels will be confined to Max. of 2 Kms |
| C. Water | | | |
| Surface water/Ground water quality parameters | 4 for surface & 8 for ground water | One sample during Study period | - |
| D. Land | | | |
| a. Soil quality b. Land use | 8 Study area | Once in a study period | Texture, infiltration rate, SAR bulk density, pH, Ca, Mg, Na, K, Zn, Mn |
| E. Biological a. Aquatic b. Terrestrial | 8 8 | Once in a study period | - |
| F. Socio-economic parameters | Study area of 10 km aerial coverage | Once in a study period | - |

Observations of the Committee

28.13.14 The Committee noted the following:

- i. DRI project with 350 TPD kiln was installed under CTE of 12th Jan 2005. CTO is valid till. 26th Feb 2022.
- ii. The expansion project is for adding 650 TPD DRI, 4x30 T IF, Rolling Mill, RHF, FAP to manufacture FeMn, FeSi, Fe Cr and Pig Iron, power plant and a brick manufacturing unit at a total cost of 602.5 Cr.
- iii. Land required for the project is 53.32 Acres.
- iv. There are 8 RFs existing in the study area of 10 Km.
- v. Total water for existing and proposed project shall be 1613 KLD. Out of this 267 KLD water shall be drawn from ground and balance 1346 KLD from Kelo River which is 1.5 km away from the Plant. Permission for water withdrawal is not available as yet.
- vi. Air cooled condensers shall be used in the power plant.
- vii. Jigging and briquetting plant shall be installed to recover metallics and to recycled fine dust.
- viii. FeCr slag after jigging shall be subjected to TCLP test to ensure its utilisation or disposal in TSDF.

- ix. Nearest habitation to the plant boundary are, Kelo Priyotoma Colony a rehabilitated village 300 m East and Chiraipani village 350 m South. The Colony has been constructed in June 2012 while the Plant came into operation in 2009.
- x. PP has committed a 30 meters wide green belt in east and south towards these settlements.
- xi. DFO has confirmed that the plant area is not involving any forest land. Further he has confirmed that nearest forest from the plant is 600 m away.

Recommendations of the Committee

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

- i. Stack emission shall have PM emission less than 30 mg/Nm³.
- ii. 4th hole extraction system shall be provided with SAF.
- iii. No ground water abstraction shall be permitted after expansion. 100 % water shall be sourced from Kelo River. RWH shall be practiced extensively to recharge ground water.
- iv. 85-90% billets shall be directly hot charged and balance through RHF using LDO/FO.
- v. There shall be no discharge of effluent from the plant. Sanatory waste water shall be treated in STP. MSW waste shall be treated in digester and recovered gas shall be used in the canteen.
- vi. Air cooled condensers shall be used in the power plant.
- vii. Jigging and briquetting plant shall be installed to recover metallics and to recycled dust.
- viii. FeCr slag after jigging shall be subjected to TCLP test to ensure its utilization or disposal in TSDF.
- ix. CEMS shall be provided on all process stacks and the signal shall be received in plant control room for central control of APCDs installed in the plant.
- x. All roads in the plant shall be paved and industrial vacuum cleaners shall be used regularly to clean roads to reduce fugitive emissions.
- xi. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.
- xii. Action plan for rainwater harvesting shall be submitted.
- xiii. Ultralow NOx burner with three stage combustion, flue gas recirculation and auto combustion control system shall be used.
- xiv. A 30 m wide green belt shall be provided towards the village and a total of 36% area shall be planted green as committed by PP.

28.14 Greenfield project for installation of production facilities for production of : Sponge Iron 245000 TPA; Mild Steel Billet 179550 TPA and/or Rerolled Steel Products through Hot Charging 131970 TPA; Rerolled Steel Product through Reheating Furnace 42194 TPA; Ferro Alloys 75000 TPA or Pig Iron 150000 TPA, Captive Power 283MW (16MW through WHRB and 12MW through AFBC) Fly Ash Brick 150000 TPA by **M/s. Kusum Smelters Private Limited** located at Village-Dhamni, Tahsil-Patharia, **District-Mungeli, Chhattisgarh** [Online Proposal No. IA/CG/IND/190436/2020, File No. J-11011/197/2020-IA-II(I)] – **Amendment in Terms of Reference** – regarding.

28.14.1 M/s. Kusum Smelters Private Limited has made an online application vide proposal no. IA/CG/IND/190436/2020 dated 30/12/2020 along with Form 3 and sought for amendment in the Terms of Reference accorded by the Ministry vide letter no. J-11011/197/2020-IA-II(I) dated 22/10/2020. The proposed project activity is listed at 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and AFBC based power plant falls under S.No. 1 (d) of the schedule of the EIA Notification, 2006 and appraised at Central Level

Details submitted by the project proponent

28.14.2 The ToR for the Greenfield project for installation of production facilities for production of : Sponge Iron 245000 TPA; Mild Steel Billet 179550 TPA and/or Rerolled Steel Products through Hot Charging 131970 TPA; Rerolled Steel Product through Reheating Furnace 42194 TPA; Ferro Alloys 75000 TPA or Pig Iron 150000 TPA, Captive Power 28MW (16MW through WHRB and 12MW through AFBC) Fly Ash Brick 150000 TPA by M/s. Kusum Smelters Private Limited located at Village-Dhamni, Tahsil-Patharia, District-Mungeli, Chhattisgarh was accorded by MoEF&CC vide letter no. J-11011/197/2020-IA-II(I) dated 22/10/2020.

28.14.3 The project proponent has applied for the following amendment in ToR as follows:

- i. The amendment in capacity of F.B.C. based on Coal/Char-Dolochar is proposed as per existing TOR FBC capacity is 12 MW which is proposed to be increased by 28 MW and total capacity of FBC based power generation will be 40 MW. **The Water-cooled condenser is being proposed in place of air-cooled condenser as the project is located near to a perennial river from which required quantity water will be made available. All other facility and capacity will remain same.**
- ii. Quantity of Fuel Coal for FBC based power generation will be increased from 24696.00 to 202964.00 TPA which will be sourced from SECL Mines and transported through properly covered vehicles only.
- iii. Water requirement for entire plant will be increased from 2964 KLD to 5624 KLD. The surface water will be used from nearby River. No ground water use proposed.
- iv. No change in greenbelt area. 33% (i.e. 3.53 Hectare) will be developed as green belt.

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

| Sl. No. | As per TOR issued on dated 22.10.2020 | | | Proposed amended capacity | | Remark |
|---------|---------------------------------------|--|------------|--|------------|-----------|
| | Product | Facility | Capacity | Facility | Capacity | |
| 1 | Sponge Iron | 350 MT X 2 Nos | 245000 TPA | 350 MT X 2 Nos | 245000 TPA | No change |
| 2 | Induction Furnace LRF and CCM | 15 MT X 4 Nos Induction furnace 15 Ton LRF X 1 No | 179550 TPA | 15 MT X 4 Nos Induction furnace 15 Ton LRF X 1 No | 179550 TPA | No change |

| Sl. No. | As per TOR issued on dated 22.10.2020 | | | Proposed amended capacity | | Remark |
|---------|---------------------------------------|--|-----------------------------|---------------------------|-----------------------------|--|
| | Product | Facility | Capacity | Facility | Capacity | |
| 3 | Rerolled Steel Products | Hot Charging Rolling Mill | 131970 TPA | Hot Charging Rolling Mill | 131970 TPA | No change |
| 4 | Rerolled Steel Product | Billet Reheating Furnace based Rerolling Mill (Fuel Fired-Coal Gasifier) | 42194 TPA | | 42194 TPA | No change |
| 5 | Ferro Alloys And/Ore Pig Iron | 9 MVA X 4 Nos | 75000 TPA And/or 150000 TPA | 9 MVA X 4 Nos | 75000 TPA And/or 150000 TPA | No change |
| 6 | Captive Power | WHRB | 16 MW | WHRB | 16 MW | No change |
| 7 | Captive Power | FBC | 12 MW | FBC | 40 MW | 28 MW FBC capacity based on Coal/Char-Dolochar is being increased |
| 8 | Fly Ash Brick /Block | Fly Ash brick Plant | 150000 TPA | Fly Ash brick Plant | 150000 TPA | No change |

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

28.14.6 Name of the consultant: M/s. Anacon Laboratories Pvt. Ltd.[S.No. 60, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021].

Observations of the Committee

28.14.7 The Committee noted the following:

- i. TOR was issued on 22nd Oct 2020 for a green field DRI based ISP and Ferro Alloys Plant with Captive power generation.
- ii. After detailed engineering the PP has discovered that a 40 MW AFBC power plant would be more viable than a 12 AFBC proposed earlier.
- iii. Request is also made to change Air Cooled condenser to water cooled. PP has advocated that Air cooled condensers are more expensive and consume more energy.

Recommendations of the Committee

- 28.14.8 In view of the foregoing and after deliberations, the committee recommended to amend the ToR for change in the capacity of Power Plant only as mentioned above. **The request for water cooled condenser has not been accepted by the Committee.**
- 28.15 Expansion of production capacity of Sponge Iron Kilns, Induction Furnaces, Rolling Mills, Captive Power Plant (AFBC + WHRB), Ferro Alloys Plant and Fly Ash Brick manufacturing by **M/s. Sambhv Sponge Power Pvt Ltd. (Formerly, M/s. Khetan Sponge and Infrastructure Private Limited)** located at Village Sarora, Tehsil Tilda **District Raipur, Chhattisgarh** [Online Proposal No. IA/CG/IND/190777/2020, File No. J-11011/387/2009-IA-II(I)] – **Amendment in Terms of Reference** – regarding.
- 28.15.1 M/s. Sambhv Sponge Power Pvt Ltd. has made an online application vide proposal no. IA/CG/IND/190777/2020 dated 31/12/2020 along with Form 3 and sought for amendment in the Terms of Reference accorded by the Ministry vide letter no. J-11011/387/2009-IA.II(I) dated 11/11/2020. The proposed project activity is listed at 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

- 28.15.2 The ToR for Expansion of production capacity of Sponge Iron Kilns, Induction Furnaces, Rolling Mills, Captive Power Plant (AFBC + WHRB), Ferro Alloys Plant and Fly Ash Brick manufacturing by Sambhv Sponge Power Pvt Ltd. located at Village-Sarora, Tahsil-Tilda, District-Raipur, Chhattisgarh was accorded by MoEF&CC vide letter no. J-11011/387/2009-IA.II(I) dated 11/11/2020.
- 28.15.3 The project proponent has submitted that there is no change in the capacities of products and process for which standard TOR has already been granted. However, following new products are being added to the ToR:
- **New addition of MS Black Pipe making unit for 5.00 Lakhs TPA.** The Cold Rolled strips or Hot Strips as per the specific requirement of the market will be converted to MS Black Pipes. For this ERW welding technology-based Pipe mill will be set up to produce pipes of different diameters ranging from 25 MM to 250 mm in size. The capacity of the ERW Pipe will be about 1500 TPD Capacity. The process does not require any fuel for the same and also there is no pickling is required for it.
 - **New addition of Cold Rolled MS Steel Strips Making facility:** The HR Strips will be cold rolled for Pipe Making, Cold rolling mill will be installed with about 1500 TPD Capacity. The cold rolling mill will also have one annealing furnace and also have one Pickling unit for descaling of the Cold rolled strips. The annual Capacity of this will be 5 Lakhs TPA. The process is considered as Secondary Metallurgy Process as per EIA notification 2006.
 - **New addition of Galvanizing Units:** One galvanizing facility will be created for zinc coating one ERW Pipes, The Capacity of this will be kept to 1 Lakh TPA. Zinc melting furnace will be set up for this which will be Furnace Oil Fired and Acid Picking Unit and Rinzing tanks will be set up in the process.

- Consumable ERW electros 1000 TPA, Furnace oil for Annealing Furnace and Galvanizing Furnace 3007 TPA. Zinc 5000 TPA, Lead 100 TPA, Pickling Acid 5365 TPA, and lime 2750 TPA will be required for new additional facility applied.
- In MS Billet production facility AOD/VOD process will be added along with Induction Furnace, LRF and CCM. No change in production Capacity.
- Water requirement for entire plant will be increased from 1819 KLD to 1914 KLD. Surface water is not available from nearby sources hence ground water is being used. For future expansion also the source will be Ground Water. The unit is having NOC form CGWA for 173800 KLA, the area is under Safe Zone. Further, the company will obtain NOC for additional quantity.

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

| Sl. No. | As per TOR issued on dated 11.11.2020 | | | Proposed amended capacity | | Remark |
|---------|---------------------------------------|---|----------------------------|---|----------------------------|--|
| | Product | Facility | Capacity | Facility | Capacity | |
| 1 | Sponge Iron | 100 TPD X 3 Nos+ 150 TPDX4 Nos. | 315000 TPA | 315000 TPA | 245000 TPA | No change |
| 2 | MS Billets | 10MTX5+12.5MTX8 I.F., CCM, 15 MT LRF | 450000 TPA | 10MTX5+12.5MTX8 I.F., CCM, 15 MT LRF,AOD/VOD | 450000 TPA | AOD/VOD will be added no change in capacity. |
| 3 | Rerolled Steel Products | Hot Charging Rolling Mill | 350000 TPA | Hot Charging Rolling Mill | 350000 TPA | No change |
| 4 | Rerolled Steel Product | Billet Reheating Furnace based on Coal Gasifier | 300000 TPA | Billet Reheating Furnace based on Coal Gasifier | 300000 TPA | No change |
| 5 | Ferro Alloys And/Ore Pig Iron | 9 MVA X 1 No. | 19000 TPA And/or 38000 TPA | 9 MVA X 1 No. | 19000 TPA And/or 38000 TPA | No change |
| 6 | Captive Power | WHRB | 16 MW | WHRB | 16 MW | No change |
| 7 | Captive Power | AFBC | 14 MW | FBC | 14 MW | No change |
| 8 | Fly Ash Brick /Block | Fly Ash brick Plant | 115500 TPA | Fly Ash brick Plant | 115500 TPA | No change |
| 9 | ERW Black Pipe | - | - | Pipe Mill | 500000 TPA | New Addition. |
| 10 | Galvanized Steel | - | - | Galvanizing unit | 100000 TPA | New addition |
| 11 | Cold Rolled Steel | - | - | Cold Rolling Mill | 100000 TPA | New addition. |

| Sl. No. | As per TOR issued on dated 11.11.2020 | | | Proposed amended capacity | | Remark |
|---------|---------------------------------------|----------|----------|---------------------------|----------|--------|
| | Product | Facility | Capacity | Facility | Capacity | |
| | product | | | | | |

28.15.5 The project proponent has submitted that the proposed capacity addition is to improve the downstream value addition by production of ERW pipes which is having good demand in India as well as exports too. Many of the common facilities will be used and most of the raw material will be available captively. Also, major portion of the steel scrap will be recycled within plant. It will help the economic viability as well as improve the productivity of manpower.

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

28.15.7 Name of the consultant: M/s. Anacon Laboratories Pvt. Ltd.[S.No. 60, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021].

Observations of the Committee

28.15.8 The Committee noted the following:

PP approaches for Change in product mix as given below:

- i. ERW Black Pipe - 500000 TPA
- ii. Galvanised steel - 100000 TPA
- iii. Cold Rolled Steel.

Change in plant and machinery;

- i. Adding AOD and VOD vessels
- ii. ERW manufacturing Unit addition
- iii. Galvanising Plant addition, and
- iv. Cold Rolling mill.

Recommendations of the Committee

28.15.9 In view of the foregoing and after deliberations, the committee recommended to amend the ToR dated 11/11/2020 as mentioned at table given at para 28.15.4 subject to stipulation following specific ToRs:

- i. Handling of HW generated the plant as per the provisions of HW and Other waste (Management handling and Transboundary Movement) of HW 2016.
- ii. CEMS shall be provided on all process stacks and the signal shall be received in plant control room for central control of APCDs installed in the plant.
- iii. 9.3 ha area shall be planted as Green Belt. 30-meter-wide green belt shall be provided towards the village.

28.16 Proposed expansion of existing Steel Plant by installation of 2x350 TPD DRI Kilns, 2x20 T and 2x16.5 T Induction Furnaces & 1x30 T Electric Arc Furnace with matching LRF & CCM, 10,000 TPA capacity Galvanization Plant along with 26 MW Captive Power Plant (16 MW WHRB + 10 MW AFBC) by **M/s. N.N Ispat Private Limited** located at village: Diwandighi, P.O. & Mouza: Mirzapur, Palitpur Road, P.S. & **District: Purba Burdwan, West Bengal**

[Online Proposal No. IA/WB/IND/190973/2021, File No. J-11011/280/2012-IA-II(I)] – **Amendment in Terms of Reference** – regarding.

28.16.1 M/s. N.N Ispat Private Limited has made an online application vide proposal no. IA/WB/IND/190973/2021 dated 01/01/2021 along with Form 3 and sought for amendment in the Terms of Reference accorded by the Ministry vide letter no. J-11011/280/2012-IA-II(I) dated 06/11/2019. The proposed project activity is listed at 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

28.16.2 The ToR for Proposed expansion of existing Steel Plant by installation of 2x350 TPD DRI Kilns, 2x20 T and 2x16.5 T Induction Furnaces & 1x30 T Electric Arc Furnace with matching LRF & CCM, 10,000 TPA capacity Galvanization Plant along with 26 MW Captive Power Plant (16 MW WHRB + 10 MW AFBC) by M/s. N.N Ispat Private Limited located at village: Diwandighi, P.O. & Mouza: Mirzapur, Palitpur Road, P.S. & District: Purba Burdwan, West Bengal was accorded by MoEF&CC vide letter no. J-11011/280/2012-IA-II(I) dated 06/11/2019.

28.16.3 The project proponent has submitted that the Company has decided to revise the above project to make it more viable both environmentally and economically. The units under operation and units not implemented as per previous Environmental clearance dated 05/02/2015, the proposed units as per new TOR dated 06/11/2019 and the Amendment Sought in the Proposed Units in the same TOR, are presented below:

| Sl. No. | Name of the Units | As per EC from MoEF&CC, (F. No. J-11011/280/2012 - IA.II (I) dated 05/02/2015 | | Proposed units as per TOR from MoEF&CC dated 06/11/2019 | Amendment Sought in the Proposed Units | Total Units |
|---------|--|---|-----------------------|---|---|---|
| | | Units under operation | Units not implemented | | | |
| 1. | Sponge Iron Plant | - | - | 2x350 TPD DRI Kilns (2,10,000 TPA Sponge Iron) | 1x350 TPD + 1X600 TPD DRI Kilns (2,85,000 TPA Sponge Iron) | 1x350 TPD + 1X600 TPD DRI Kilns (2,85,000 TPA Sponge Iron) |
| 2. | Induction Furnaces with matching LRF & CCM | 2x8 T + 2x15 T (1,38,000 TPA Billets) | - | 4x20 T (2,35,000 TPA Billets) | - | 2x8 T, 2x15 T, 4x20 T (3,73,000 TPA Billets) |
| 3. | Electric Arc Furnace | - | - | 1x30 T (1,95,000 TPA Billets) | - | 1x30 T (1,95,000 TPA Billets) |
| 4. | Rolling Mill | 1,20,000 TPA Structural Steels (Angels, Channels, TMT etc.) | - | - | 1,20,000 TPA Structural Steels (Angels, Channels, Channels, | 2,40,000 TPA Structural Steels (Angels, Channels, TMT etc.) |

| Sl. No. | Name of the Units | As per EC from MoEF&CC, (F. No. J-11011/280/2012 - IA.II (I) dated 05/02/2015 | | Proposed units as per TOR from MoEF&CC dated 06/11/2019 | Amendment Sought in the Proposed Units | Total Units |
|---------|--------------------------------------|---|--|---|--|--|
| | | Units under operation | Units not implemented | | | |
| | | | | | TMT etc.) (New) | |
| 5. | Galvanising Plant | - | - | 10,000 TPA Galvanised Product | - | 10,000 TPA Galvanised Product |
| 6. | Ferro Alloy Plant | - | 2x9 MVA Submerged Arc Furnaces (Ferro Manganese - 20,460 TPA or Silico Manganese - 14,850 TPA or Ferro Silicon - 6,600 TPA) | - | - | 2x9 MVA Submerged Arc Furnaces (Ferro Manganese - 20,460 TPA or Silico Manganese - 14,850 TPA or Ferro Silicon - 6,600 TPA) |
| 7. | Foundry Consisting of Cupola Furnace | - | 2x5 T (21,500 TPA Cast Iron) | - | - | Dropped |
| 8. | Induction Furnace | - | 2x3 T (18,000 TPA Ductile Iron) | - | - | 2x3 T (18,000 TPA Ductile Iron) |
| 9. | Green Sand Plant | - | 2x20 TPH (72,000 TPA Mould) | - | - | 2x20 TPH (72,000 TPA Mould) |
| 10. | Sand Reclamation Plant | - | 2x10 TPH (80,000 TPA fresh sand) | - | - | 2x10 TPH (80,000 TPA fresh sand) |
| 11. | Captive Power Plant | - | - | 26 MW CPP (16 MW WHRB + 10 MW AFBC) | 32 MW CPP (22 MW WHRB + 10 MW AFBC) | 32 MW CPP (22 MW WHRB + 10 MW AFBC) |

28.16.4 Details of other changes, as per the granted ToR vis-à-vis proposed changes is as follows:

| Sl. No. | Description | As per TOR dated 06.11.2019 | After Amendment of TOR |
|---------|------------------|-----------------------------|---------------------------|
| 1 | Land requirement | 18.62 hectares (46 Acres) | 19.83 hectares (49 Acres) |

| Sl. No. | Description | As per TOR dated 06.11.2019 | After Amendment of TOR |
|---------|----------------------------------|---|--|
| 2 | Fresh water requirement & Source | 515 m ³ /day Source: River Damodar | 637 m ³ /day Source: River Damodar |
| 3 | Power requirement & Source | 49.5 MW Source: Proposed 26 MW CPP and rest from DVC | 55 MW Source: Proposed 32 MW C PP and rest from DVC |
| 4 | Manpower Required | 440 persons | 490 persons |
| 5 | Project Cost | Rs. 138 Crores | Rs. 153 Crores |

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

28.16.6 Name of the EIA consultant: M/s. Envirotech East Pvt. Ltd. [S.No. 165, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021]

Observations of the Committee

28.16.7 The Committee noted the following:

- i. TOR for proposed expansion was issued on 6th Nov 2019.
- ii. EC for existing plant was issued in Feb 2015.
- iii. Changes requested;
 - a. Drop one 350 TPD DRI kiln and add in place a 600 TPD kiln
 - b. Replace 16 MW WHRB by a 22 MW WHRB due to increase in Waste Heat from DRI kiln.
 - c. Add a RM of 120000 TPA.
- iv. No increase in CPP capacity has been envisaged in the proposal.

Recommendations of the Committee

28.16.8 In view of the foregoing and after deliberations, the committee recommended to amend the ToR dated 06/11/2019 as mentioned at table given at para 28.16.3 & 28.16.4 subject to stipulation following specific ToRs:

- i. Additional Dolo char generated in the plant shall be used for power generation. Dumping or sale of dolo char shall not be permitted.
- ii. An ETP for RM shall be installed to remove Oil and Grease, coarse mill scale and fine TSS of slime and scale.
- iii. Detailed Engineering drawing for the layout shall be furnished.

28.17 Proposed expansion of existing steel plant to Integrated Steel Plant through installation of 1800 TPD (3x600 TPD) DRI kilns along with Beneficiation Plant for Iron ore (1X0.6 MTPA), Pellet Plant (1x0.6 MTPA), Steel Melting Shop (2x25 T + 4x15 T Induction Furnaces) with matching LRF & CCM, Rolling Mill (0.35 MTPA), Ferro alloy Plant (4x16.5 MVA), Briquette plant for Chrome Ore (1x30 TPH), Oxygen plant (100 TPD) and 63 MW (38 MW WHRB based + 25 MW AFBC based) capacity Captive Power Plant by **M/s. Nilachal Iron and Power Limited** located at Ratanpur-Kandra Village, Gamharia Block, **District Saraikela-Kharsawan, Jharkhand** [Online Proposal No. IA/JH/IND/191315/2021; File No. J-11011/662/2008-IAII(I)] – Amendment **in Terms of Reference** – regarding.

28.17.1 M/s. Nilachal Iron and Power Limited has made an online application vide proposal no. IA/JH/IND/191315/2021 dated 04/01/2021 along with Form 3 and sought for amendment in the Terms of Reference accorded by the Ministry vide letter no. J-11011/662/2008-IAII(I) dated 06/09/2020. The proposed project activity is listed at 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

28.17.2 The ToR for Proposed expansion of existing steel plant to Integrated Steel Plant through installation of 1800 TPD (3x600 TPD) DRI kilns along with Beneficiation Plant for Iron ore (1x0.6 MTPA), Pellet Plant (1x0.6 MTPA), Steel Melting Shop (2x25 T + 4x15 T Induction Furnaces) with matching LRF & CCM, Rolling Mill (0.35 MTPA), Ferro alloy Plant (4x16.5 MVA), Briquette plant for Chrome Ore (1x30 TPH), Oxygen plant (100 TPD) and 63 MW (38 MW WHRB based + 25 MW AFBC based) capacity Captive Power Plant by M/s. Nilachal Iron and Power Limited located at Ratanpur-Kandra Village, Gamharia Block, District Saraikela-Kharsawan, Jharkhand was accorded by MoEF&CC vide letter no. J-11011/662/2008-IAII(I) dated 06/09/2020.

28.17.3 The project proponent has submitted that the Company has decided to revise the WHRB based Power generation capacity from 38 MW to 45 MW to make it compatible with the proposed Sponge Iron Plant of 3x600 TPD capacity. The existing unit under operation and unit under implementation, the proposed units as per new TOR dated 6th September, 2020 and the Amendment Sought in the Proposed Units in the same TOR, are presented below:

| Sl. No. | Name of the Units | Existing Unit under operation | Unit under implementation | Proposed units as per TOR from MoEF&CC dated 06/09/2020 | Amendment Sought in the Proposed Units | Total Units |
|---------|--|--------------------------------------|---------------------------|---|--|--|
| 1 | Beneficiation Plant | - | | 6,00,000 TPA | | (1x0.6 MTPA) 6,00,000 TPA Concentrated Iron Ore |
| 2 | Pelletization Plant | - | | 6,00,000 TPA (Module: 1x6,00,000 TPA) | | (1x0.6 MTPA) 6,00,000 TPA Pellets |
| 3 | Sponge Iron Plant | 550 TPD (2x100 TPD, 1x350 TPD) | | 1800 TPD (3x600 TPD) | | 2350 TPD Sponge Iron (2x100 TPD, 1x350 TPD, 3x600 TPD) |
| 4 | Steel Melting Shop (SMS) with matching LRF & CCM | - | | Induction Furnaces (2x25T + 4x15T) | | Induction Furnaces (2x25T + 4x15T) 3,63,000 TPA Liquid Steel (3,59,000 TPA Billets) |
| 5 | Rolling Mill (Liquid Steel) | - | | 3,50,000 TPA | | 3,50,000 TPA Rods, Bars, Light |

| Sl. No. | Name of the Units | Existing Unit under operation | Unit under implementation | Proposed units as per TOR from MoEF&CC dated 06/09/2020 | Amendment Sought in the Proposed Units | Total Units |
|---------|----------------------------|-------------------------------|---------------------------|---|--|--|
| | | | | | | Structural |
| 6 | Ferro Alloy Plant | - | | Submerged Arc Furnaces (SAF) - 4 x 16.5 MVA | | (SAF) - 4 x 16.5 MVA 1,25,000 TPA Ferro Alloys (35,160 TPA Ferro-Chrome + 14,367 TPA Ferro-Silicon + 43,633 TPA Ferro-Manganese + 31,840 TPA Silico-Manganese) |
| 7 | Chrome Ore Briquette Plant | - | | 30 TPH | | 30 TPH |
| 8 | Oxygen Plant | - | | 100 TPD | | 100 TPD Oxygen |
| 9 | Captive Power Plant | - | 12 MW WHRB based | 63 MW (38 MW WHRB based + 25 MW FBC based) | 70 MW (45 MW WHRB based + 25 MW AFBC based) | 82 MW Power |

28.17.4 Details of other changes, as per the granted ToR vis-à-vis proposed changes is as follows:

| Sl. No. | Properties | As per TOR dated 06.09.2020 | After Amendment of TOR |
|---------|---------------------------------|-----------------------------|------------------------|
| 1 | Land requirement | 80.93 hectares (200 acres) | No change |
| 2 | Fresh water requirement for CPP | 1125 cum/day | 1230 cum/day |
| 3 | Power requirement | 121 MW | 122 MW |
| 4 | Cost of CPP | 375 Crores | 420 Crores |

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

28.17.6 Name of the EIA consultant: M/s. Envirotech East Pvt. Ltd. [S.No. 165, List of ACOs with their Certificate / Extension Letter no. Rev. 05, dated Dec 18, 2020]

Observations of the Committee

28.17.7 The Committee noted the following:

- i. TOR was issued in 06/09/2020.
- ii. PP after detailed engineering wants to increase the power generation from 63 MW to 70 MW (45 MW WHRB and 25 MW CFBC)
- iii. Fresh water requirement would increase from 1125 KLD to 1230KLD
- iv. Project cost would go up from 375 Cr to 420 Cr.
- v. For Combustion based CPP plant heat rate should be 2600 Kcal/kwh.

Recommendations of the Committee

28.17.8 In view of the foregoing and after deliberations, the committee recommended to amend the ToR dated 06/09/2020 as mentioned at table given at para 28.17.3 & 28.17.4 above.

28.18 Expansion, Modernization of existing facilities along with integration of existing environmental clearances [Sponge Iron Plant - 6,50,000 TPA; Capacity enhancement of Steel Melting Shop from 4,00,000 TPA to 7,00,000 TPA; Power generation – 73 MW; Ferro Alloys – 16,500 TPA; Pig iron – 33,000 TPA; H.B. Wire – 1,00,000 TPA; Oxygen & Nitrogen plants; Fly ash brick plant, Iron ore beneficiation – 10,00,000 TPA; Rolling Mill – 4,00,000 TPA; Induction Furnace for Casting in place of Arc Furnace– 5,000 TPA; Iron Ore Pellet Plant – Capacity enhancement from 21,00,000 TPA to 24,00,000 TPA; Coal Gasification System - 60,000 Nm³/hr to 92,000 Nm³/hr; Slag Crushing Plant – 1,75,000 TPA and Mineral grinding unit – 2,00,000 TPA) by **M/s. Godavari Power and Ispat Limited** located at 428/2, Phase-I, Industrial Area, Siltara, **Raipur, Chhattisgarh** - [Online Proposal No. IA/CG/IND/4250/2005, File No. J- 11011/326/2005-IA.II.(I)] – **Amendment in Environment Clearance** – regarding.

28.18.1 M/s. Godavari Power and Ispat Limited has made an online application vide proposal no. IA/CG/IND/4250/2005 along with Form 4 and sought for amendment in the Environmental Clearance accorded by the Ministry vide letter no. J-11011/326/2005-IA.II(I) dated 01/12/2020.

Details submitted by the project proponent

28.18.2 EC was accorded to M/s. Godavari Power and Ispat Limited vide letter No. J-11011/326/2005-I A.II(I) dated 01/12/2020 for the project mentioned above subject to stipulation of specific and general conditions.

28.18.3 The project proponent has submitted that amendment in the aforesaid EC is sought for following conditions:

| Sl. No. | Specific Condition No. | Specific Condition | Reason for seeking Amendment |
|---------|------------------------|--|--|
| 1. | iii | Stack emissions shall be less than 30 mg/Nm ³ from all stacks in the plant. | To achieve stack emission less than 30 mg/Nm ³ from existing stacks in the plant, it is requested that an appropriate time period up to 31/03/2023 is essentially required for replacement of controller panels of precision III in all 4 fields with |

| Sl. No. | Specific Condition No. | Specific Condition | Reason for seeking Amendment |
|---------|------------------------|---|--|
| | | | high frequency controllers, for change in existing emitting/collecting electrodes with latest design technology, to increase collection area inside ESP and transformer set of ESP. |
| 2. | vi | Sludge drying beds shall be replaced by filter presses and dry disposal of sludge shall be practiced. | Since filter press shall be installed by 31 st March, 2021 to get the sludge dewatered and in dry form, therefore, it is requested that an appropriate time period for dry disposal of sludge may kindly be given up to 31st March, 2023. |
| 3. | viii | 100% water consumed annually shall be harvested and recharged with monitoring facilities. | GPIL shall use ground water 56100 m ³ /Annum for domestic purpose only. Potential of rain water harvesting is 483547 m ³ /Annum is more than the withdrawal quantity of ground water. Therefore, it is requested that potential of rain water harvesting within the plant premise may kindly be stipulated in the condition considering the ground water consumption as per CGWA guidelines. |
| 4. | ix | Water consumption shall be brought down to less than 5 m ³ /t of steel as per CREP Charter and subsequently the same shall be reduce to 4.5 m ³ /t of steel within two years. | Water consumption shall be brought down to less than 5 m ³ /t of steel as per CREP Charter and it is requested that an appropriate time period may kindly be given to further reduce the same to 4.5 m ³ /t of steel. |

28.18.4 The project proponent has reported that there is no change in project configuration & capacity granted in EC vide File No. J-11011/326/2005-I A.II(I) dated 01/12/2020.

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

Observations of the Committee

28.18.6 The Committee noted the following:

- i. EC was issued on 1.12.2020 for expansion of DRI, SMS, FAP and CPP.
- ii. Amendment is sought for the following Specific terms;
 - a. Specific Condition # (iii)- Stack emissions shall be less than 30 mg/Nm³ from all stacks in the plant.
 - b. Specific Condition # (vi)- Sludge drying beds shall be replaced by filter presses and dry disposal of the sludge shall be practiced.
 - c. Specific Condition # (viii)- 100% water consumed annually shall be harvested and recharged with monitoring facilities.

- d. Specific Condition # (ix)- water consumption shall be brought down to less than 5.0 m³/t of steel as per CREP Charter and subsequently the same shall be reduced to 4.5 m³/t of steel within two years.

Recommendations of the Committee

28.18.7 In view of the foregoing and after deliberations, the committee recommended for amendment in the following specific conditions of the EC dated 1/12/2020:

- i. Specific Condition # (iii)- PP shall achieve the stack emission to less than 30 mg/Nm³ from existing stacks in the plant by 31/03/2023.
- ii. Specific Condition # (vi)- In order to phase out the sludge drying beds, a filter press shall be installed by 31/03/2021 to dewater and dispose the sludge in dry form. Complete switch over to dry disposal of sludge shall be achieved latest by 31/12/2021.
- iii. Specific Condition # (viii)-PP shall use ground water 56100 m³/annum for domestic purpose only. Potential for rain water harvesting inside the plant is 483547 m³/annum. Therefore, potential of rain water harvesting within the plant premise shall be harvested and recharged with monitoring facilities.
- iv. Specific Condition # (ix)- Water consumption shall be brought down to less than 5 m³/t of steel as per CREP Charter and subsequently the same shall be reduced to 4.5 m³/t of steel by March, 2023.

20th January, 2021

28.19 Greenfield Copper Refinery Plant (1.0 MTPA) project of **M/s. Adani Enterprises Limited** located at Adani Ports and Special Economic Zone land in village(s) Siracha and Navinal, Taluka Mundra, **District Kutch, Gujarat** [Online Proposal No. IA/GJ/IND/86812/2016; File No. J-11011/113/2016-IA-II(I)] – **Amendment in Environment Clearance** – regarding.

28.19.1 **M/s Adani Enterprises Limited** located at Adani Ports and Special Economic Zone land in village(s) Siracha and Navinal, Taluka Mundra, District Kutch, Gujarat has made online application vide proposal no. IA/GJ/IND/86812/2016 dated 9/1/2021 and sought for amendment in Environment Clearance (EC) granted on 8/5/2020.

28.19.2 The project proposal of M/s. Adani Enterprises Limited located at Adani Ports and Special Economic Zone land in village(s) Siracha and Navinal, Taluka Mundra, District Kutch, Gujarat had received initially in this Ministry vide proposal number IA/GJ/IND/86812/2016 dated 06/12/2018 along with necessary documents for seeking Environmental Clearance (EC) under the provisions of EIA Notification 2006. The above-mentioned project proposal was considered in EAC meeting held during 9-11th January, 2019, 22-23rd August 2019, 23-24th December 2019 and 24-25th February 2020. After deliberation, committee recommended to grant the EC with specific conditions in addition to the general conditions as per the ministry's OM 22-34/2018 -III dated 9/8/2018. The proposed project activity is listed in Category "A", Project or Activity 3(a) i.e Metallurgical industries (Ferrous & non-Ferrous) and the proposal is appraised at centre level.

Details submitted by the project proponent

28.19.3 Configuration & capacity change granted in EC/ToR vis-a-vis with the proposed EC/ToR

| EC Para No. | Details as per EC Granted | Proposed Amendment in EC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|--|--------------------------|--------------------------------|-------|----------------------------|----------|----------------------|-----|----------|---|-----------------------|-----|-----------|---|----------------------------------|-----|-----------|---|---|-----|----------|---|----------------------|-----|-----------|---|---|-----|----------|---|--|-----|----------|---|---------------------------|-----|--------|-----------|-------------------------------|--|--|---|---------|----------|-------|--------------------------------|----------|----------------------|-----|---|-----------------------|----------------|-----|----------|--|------------------------|-----|--|---------|---------------------------------|------|--------------------------------|---|----------------------|-----|----------|---|-----------------------|-----|----------|---|--|-----|----------|---|---|-----|--------|-----------|----------------------|-----|-----------|---|---|-----|----------|---|-------------------------|-----|--------|---|---------------------------|-----|--------|---|-------------------------------|--|--|---|------|-----|----|---|--------|-----|-----|---|----------|-----|-----|----|--|----|----|
| 3 | <p>The project of M/s Adani Enterprises Limited located in villages of Siracha and Navinal, Taluka Mundra, District Kutch. State of Gujarat is for setting up of a new copper refinery for production of one million tonnes per annum (1.0 MTPA) of Copper Cathode. The detail of overall plant configuration as below:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Plant</th> <th>Units</th> <th>Capacity as per EC Granted</th> </tr> </thead> <tbody> <tr><td>1</td><td>Copper Smelter Plant</td><td>TPA</td><td>9,00,000</td></tr> <tr><td>2</td><td>Copper Refinery Plant</td><td>TPA</td><td>10,00,000</td></tr> <tr><td>3</td><td>Continuous Cast Copper Rod Plant</td><td>TPA</td><td>5,00,000</td></tr> <tr><td>4</td><td>Copper Scrap & E-Scrap Melting Facility</td><td>TPA</td><td>1,00,000</td></tr> <tr><td>5</td><td>Sulphuric Acid Plant</td><td>TPA</td><td>30,00,000</td></tr> <tr><td>6</td><td>Phosphoric Acid Plant (100% P₂O₅)</td><td>TPA</td><td>5,00,000</td></tr> <tr><td>7</td><td>Aluminum Fluoride Plant</td><td>TPA</td><td>30,000</td></tr> <tr><td>8</td><td>Oxygen (Industrial) Plant</td><td>TPM</td><td>96,000</td></tr> <tr><td>9</td><td>Precious Metal Recovery Plant</td><td></td><td></td></tr> <tr><td>a</td><td>Gold</td><td>TPA</td><td>50</td></tr> <tr><td>b</td><td>Silver</td><td>TPA</td><td>500</td></tr> <tr><td>c</td><td>Selenium⁸</td><td>TPA</td><td>288</td></tr> <tr><td>10</td><td>Waste Heat recovery boiler based power plant</td><td>MW</td><td>40</td></tr> </tbody> </table> | Sr. No. | Plant | Units | Capacity as per EC Granted | 1 | Copper Smelter Plant | TPA | 9,00,000 | 2 | Copper Refinery Plant | TPA | 10,00,000 | 3 | Continuous Cast Copper Rod Plant | TPA | 5,00,000 | 4 | Copper Scrap & E-Scrap Melting Facility | TPA | 1,00,000 | 5 | Sulphuric Acid Plant | TPA | 30,00,000 | 6 | Phosphoric Acid Plant (100% P ₂ O ₅) | TPA | 5,00,000 | 7 | Aluminum Fluoride Plant | TPA | 30,000 | 8 | Oxygen (Industrial) Plant | TPM | 96,000 | 9 | Precious Metal Recovery Plant | | | a | Gold | TPA | 50 | b | Silver | TPA | 500 | c | Selenium ⁸ | TPA | 288 | 10 | Waste Heat recovery boiler based power plant | MW | 40 | <p>The project of M/s Adani Enterprises Limited located in villages of Siracha and Navinal, Taluka Mundra, District Kutch, State of Gujarat is for setting up of a new copper refinery for production of 500 Kilo tonnes per annum (500 KTPA) of Copper Cathode. The detail of overall plant configuration as below:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Plant</th> <th>Unit</th> <th>Proposed Amendment in Capacity</th> </tr> </thead> <tbody> <tr><td>1</td><td>Copper Smelter Plant</td><td>TPA</td><td>4,50,000</td></tr> <tr><td>2</td><td>Copper Refinery Plant</td><td>TPA</td><td>5,00,000</td></tr> <tr><td>3</td><td>Continuous Cast Copper Rod Plant</td><td>TPA</td><td>2,50,000</td></tr> <tr><td>4</td><td>Copper Scrap & E-Scrap Melting Facility</td><td>TPA</td><td>50,000</td></tr> <tr><td>5</td><td>Sulphuric Acid Plant</td><td>TPA</td><td>15,00,000</td></tr> <tr><td>6</td><td>Phosphoric Acid Plant (100% P₂O₅)</td><td>TPA</td><td>2,50,000</td></tr> <tr><td>7</td><td>Aluminum Fluoride Plant</td><td>TPA</td><td>15,000</td></tr> <tr><td>8</td><td>Oxygen (Industrial) Plant</td><td>TPM</td><td>48,000</td></tr> <tr><td>9</td><td>Precious Metal Recovery Plant</td><td></td><td></td></tr> <tr><td>a</td><td>Gold</td><td>TPA</td><td>50</td></tr> <tr><td>b</td><td>Silver</td><td>TPA</td><td>500</td></tr> <tr><td>c</td><td>Selenium</td><td>TPA</td><td>192</td></tr> <tr><td>10</td><td>Waste Heat recovery boiler-based power plant</td><td>MW</td><td>20</td></tr> </tbody> </table> | Sr. No. | Plant | Unit | Proposed Amendment in Capacity | 1 | Copper Smelter Plant | TPA | 4,50,000 | 2 | Copper Refinery Plant | TPA | 5,00,000 | 3 | Continuous Cast Copper Rod Plant | TPA | 2,50,000 | 4 | Copper Scrap & E-Scrap Melting Facility | TPA | 50,000 | 5 | Sulphuric Acid Plant | TPA | 15,00,000 | 6 | Phosphoric Acid Plant (100% P ₂ O ₅) | TPA | 2,50,000 | 7 | Aluminum Fluoride Plant | TPA | 15,000 | 8 | Oxygen (Industrial) Plant | TPM | 48,000 | 9 | Precious Metal Recovery Plant | | | a | Gold | TPA | 50 | b | Silver | TPA | 500 | c | Selenium | TPA | 192 | 10 | Waste Heat recovery boiler-based power plant | MW | 20 |
| Sr. No. | Plant | Units | Capacity as per EC Granted | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Copper Smelter Plant | TPA | 9,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Copper Refinery Plant | TPA | 10,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Continuous Cast Copper Rod Plant | TPA | 5,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Copper Scrap & E-Scrap Melting Facility | TPA | 1,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Sulphuric Acid Plant | TPA | 30,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Phosphoric Acid Plant (100% P ₂ O ₅) | TPA | 5,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Aluminum Fluoride Plant | TPA | 30,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Oxygen (Industrial) Plant | TPM | 96,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Precious Metal Recovery Plant | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| a | Gold | TPA | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b | Silver | TPA | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| c | Selenium ⁸ | TPA | 288 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Waste Heat recovery boiler based power plant | MW | 40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sr. No. | Plant | Unit | Proposed Amendment in Capacity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Copper Smelter Plant | TPA | 4,50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Copper Refinery Plant | TPA | 5,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Continuous Cast Copper Rod Plant | TPA | 2,50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Copper Scrap & E-Scrap Melting Facility | TPA | 50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Sulphuric Acid Plant | TPA | 15,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Phosphoric Acid Plant (100% P ₂ O ₅) | TPA | 2,50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Aluminum Fluoride Plant | TPA | 15,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Oxygen (Industrial) Plant | TPM | 48,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Precious Metal Recovery Plant | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| a | Gold | TPA | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b | Silver | TPA | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| c | Selenium | TPA | 192 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Waste Heat recovery boiler-based power plant | MW | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | <p>The proposed capacity for different products for new site area as below:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Products</th> <th>Units</th> <th>Capacity as per EC Granted</th> </tr> </thead> <tbody> <tr><td>I</td><td>Main Products</td><td></td><td></td></tr> <tr><td>1</td><td>Copper Cathode</td><td>TPA</td><td>10,00,000</td></tr> <tr><td>2</td><td>Sulphuric Acid (> 98%)</td><td>TPA</td><td>30,00,000</td></tr> <tr><td>3</td><td>Continuous Cast Copper Wire Rod</td><td>TPA</td><td>5,00,000</td></tr> <tr><td>4</td><td>Gold</td><td>TPA</td><td>50</td></tr> <tr><td>5</td><td>Silver</td><td>TPA</td><td>500</td></tr> <tr><td>6</td><td>Phosphoric Acid (as 100% P₂O₅)</td><td>TPA</td><td>5,00,000</td></tr> <tr><td>7</td><td>Aluminum Fluoride</td><td>TPA</td><td>30,000</td></tr> <tr><td>II</td><td>By-Products</td><td></td><td></td></tr> </tbody> </table> | Sr. No. | Products | Units | Capacity as per EC Granted | I | Main Products | | | 1 | Copper Cathode | TPA | 10,00,000 | 2 | Sulphuric Acid (> 98%) | TPA | 30,00,000 | 3 | Continuous Cast Copper Wire Rod | TPA | 5,00,000 | 4 | Gold | TPA | 50 | 5 | Silver | TPA | 500 | 6 | Phosphoric Acid (as 100% P ₂ O ₅) | TPA | 5,00,000 | 7 | Aluminum Fluoride | TPA | 30,000 | II | By-Products | | | <p>The proposed capacity for different products for new site area as below:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Products</th> <th>Units</th> <th>Proposed Amendment in Capacity</th> </tr> </thead> <tbody> <tr><td>I</td><td>Main Products</td><td></td><td></td></tr> <tr><td>1</td><td>Copper Cathode</td><td>TPA</td><td>5,00,000</td></tr> <tr><td>2</td><td>Sulphuric Acid (> 98%)</td><td>TPA</td><td>15,00,000</td></tr> <tr><td>3</td><td>Continuous Cast Copper Wire Rod</td><td>TPA</td><td>2,50,000</td></tr> <tr><td>4</td><td>Gold</td><td>TPA</td><td>50</td></tr> <tr><td>5</td><td>Silver</td><td>TPA</td><td>500</td></tr> <tr><td>6</td><td>Phosphoric Acid (as 100% P₂O₅)</td><td>TPA</td><td>2,50,000</td></tr> <tr><td>7</td><td>Aluminum Fluoride</td><td>TPA</td><td>15,000</td></tr> <tr><td>II</td><td>By-Products</td><td></td><td></td></tr> <tr><td>8</td><td>Anode Slime</td><td>TPM</td><td>250</td></tr> </tbody> </table> | Sr. No. | Products | Units | Proposed Amendment in Capacity | I | Main Products | | | 1 | Copper Cathode | TPA | 5,00,000 | 2 | Sulphuric Acid (> 98%) | TPA | 15,00,000 | 3 | Continuous Cast Copper Wire Rod | TPA | 2,50,000 | 4 | Gold | TPA | 50 | 5 | Silver | TPA | 500 | 6 | Phosphoric Acid (as 100% P ₂ O ₅) | TPA | 2,50,000 | 7 | Aluminum Fluoride | TPA | 15,000 | II | By-Products | | | 8 | Anode Slime | TPM | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sr. No. | Products | Units | Capacity as per EC Granted | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | Main Products | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Copper Cathode | TPA | 10,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Sulphuric Acid (> 98%) | TPA | 30,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Continuous Cast Copper Wire Rod | TPA | 5,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Gold | TPA | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Silver | TPA | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Phosphoric Acid (as 100% P ₂ O ₅) | TPA | 5,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Aluminum Fluoride | TPA | 30,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| II | By-Products | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sr. No. | Products | Units | Proposed Amendment in Capacity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | Main Products | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Copper Cathode | TPA | 5,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Sulphuric Acid (> 98%) | TPA | 15,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Continuous Cast Copper Wire Rod | TPA | 2,50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Gold | TPA | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Silver | TPA | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Phosphoric Acid (as 100% P ₂ O ₅) | TPA | 2,50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Aluminum Fluoride | TPA | 15,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| II | By-Products | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Anode Slime | TPM | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| EC Para No. | Details as per EC Granted | | | | Proposed Amendment in EC | | | |
|-------------|---------------------------|---|-----|----------|--------------------------|---|-----|----------|
| | 8 | Anode Slime | TPM | 500 | 9 | Selenium | TPM | 16 |
| | 9 | Selenium | TPM | 24 | 10 | Platinum Group Metal (PGM) Concentrate | TPM | 4 |
| | 10 | Platinum Group Metal (PGM) Concentrate | TPM | 6 | 11 | Ferro Sand/ Iron Silicate - Copper Slag (Granulated) | TPM | 86,380 |
| | 11 | Ferro Sand/ Iron Silicate - Copper Slag (Granulated) | TPM | 1,72,761 | 12 | Phosphogypsum | TPM | 1,04,167 |
| | 12 | Phosphogypsum | TPM | 2,08,334 | 13 | Hydro Fluro Silicic Acid (~20% as H ₂ SiF ₆) | TPM | 1,250 |
| | 13 | Hydro Fluro Silicic Acid (~20% as H ₂ SiF ₆) | TPM | 2,500 | 14 | Copper Telluride | TPM | 21 |
| | 14 | Copper Telluride | TPM | 42 | 15 | Tellurium | TPM | 4 |
| | 15 | Tellurium | TPM | 8 | 16 | Nickel | TPM | 8 |
| | 16 | Nickel | TPM | 16 | 17 | Bismuth Bisulphate | TPM | 60 |
| | 17 | Bismuth Bisulphate | TPM | 120 | 18 | Calomel (Mercury Chloride) | TPM | 9 |
| | 18 | Calomel (Mercury Chloride) | TPM | 18 | 19 | Mercury | TPM | 8 |
| | 19 | Mercury | TPM | 16 | 20 | CCR Mill Scale | TPM | 25 |
| | 20 | CCR Mill Scale | TPM | 50 | | | | |

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

AMENDMENTS REQUIRED IN THE EC DATED 08/05/2020

| EC Para No. | Details as per EC Granted | Proposed Amendment in EC |
|-------------|---|--|
| 2 | The Greenfield Copper Refinery of One Million Tons Per Annum (1.0 MTPA) project by M/s Adani Enterprises Limited, proposed at Adani Ports and Special Economic Zone land in village(s) Siracha and Navinal, Taluka Mundra, District Kutch, State Gujarat was initially received in the Ministry on 21 st April 2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 6 th meeting held on 4 th May 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest & Climate Change had prescribed ToRs to the project on 21 st June 2016 vide Lr. No. F. No. J-11011/113/2016 IA.II (I) | No Change |
| 3 | The project of M/s Adani Enterprises Limited located in villages of Siracha and Navinal, Taluka Mundra, District Kutch, State of Gujarat is for setting up of a new copper refinery for production of one million tonnes per annum | The project of M/s Adani Enterprises Limited located in villages of Siracha and Navinal, Taluka Mundra, District Kutch, State of Gujarat is for setting up of a new copper refinery for production of 500 Kilo tonnes per annum |

| EC Para No. | Details as per EC Granted | Proposed Amendment in EC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|--|--------------------------|--------------------------------|-------|----------------------------|----------|----------------------|-----|----------|---|-----------------------|-----|-----------|---|----------------------------------|-----|-----------|---|---|-----|----------|---|----------------------|-----|-----------|---|---|-----|----------|---|--|-----|----------|---|---------------------------|-----|--------|-----------|-------------------------------|--|--|---|-------------|-----|-----|---|----------|-----|-----|----|--|-----|-----|----|--|-----|----------|--|---------|----------|-------|--------------------------------|----------|----------------------|-----|----------|---|-----------------------|-----|----------|---|----------------------------------|-----|-----------|---|---|-----|----------|---|----------------------|-----|-----------|---|---|-----|----------|---|--|-----|----------|---|---------------------------|-----|--------|-----------|-------------------------------|--|--|---|-------------|-----|-----|---|----------|-----|-----|----|--|-----|-----|----|--|-----|--------|
| | <p>(1.0 MTPA) of Copper Cathode. The detail of overall plant configuration as below:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Plant</th> <th>Units</th> <th>Capacity as per EC Granted</th> </tr> </thead> <tbody> <tr><td>1</td><td>Copper Smelter Plant</td><td>TPA</td><td>9,00,000</td></tr> <tr><td>2</td><td>Copper Refinery Plant</td><td>TPA</td><td>10,00,000</td></tr> <tr><td>3</td><td>Continuous Cast Copper Rod Plant</td><td>TPA</td><td>5,00,000</td></tr> <tr><td>4</td><td>Copper Scrap & E-Scrap Melting Facility</td><td>TPA</td><td>1,00,000</td></tr> <tr><td>5</td><td>Sulphuric Acid Plant</td><td>TPA</td><td>30,00,000</td></tr> <tr><td>6</td><td>Phosphoric Acid Plant (100% P₂O₅)</td><td>TPA</td><td>5,00,000</td></tr> <tr><td>7</td><td>Aluminum Fluoride Plant</td><td>TPA</td><td>30,000</td></tr> <tr><td>8</td><td>Oxygen (Industrial) Plant</td><td>TPM</td><td>96,000</td></tr> <tr><td>9</td><td>Precious Metal Recovery Plant</td><td></td><td></td></tr> <tr><td>a</td><td>Gold</td><td>TPA</td><td>50</td></tr> <tr><td>b</td><td>Silver</td><td>TPA</td><td>500</td></tr> <tr><td>c</td><td>Selenium⁸</td><td>TPA</td><td>288</td></tr> <tr><td>10</td><td>Waste Heat recovery boiler based power plant</td><td>MW</td><td>40</td></tr> </tbody> </table> | Sr. No. | Plant | Units | Capacity as per EC Granted | 1 | Copper Smelter Plant | TPA | 9,00,000 | 2 | Copper Refinery Plant | TPA | 10,00,000 | 3 | Continuous Cast Copper Rod Plant | TPA | 5,00,000 | 4 | Copper Scrap & E-Scrap Melting Facility | TPA | 1,00,000 | 5 | Sulphuric Acid Plant | TPA | 30,00,000 | 6 | Phosphoric Acid Plant (100% P ₂ O ₅) | TPA | 5,00,000 | 7 | Aluminum Fluoride Plant | TPA | 30,000 | 8 | Oxygen (Industrial) Plant | TPM | 96,000 | 9 | Precious Metal Recovery Plant | | | a | Gold | TPA | 50 | b | Silver | TPA | 500 | c | Selenium ⁸ | TPA | 288 | 10 | Waste Heat recovery boiler based power plant | MW | 40 | <p>(500 KTPA) of Copper Cathode. The detail of overall plant configuration as below:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Plant</th> <th>Unit</th> <th>Proposed Amendment in Capacity</th> </tr> </thead> <tbody> <tr><td>1</td><td>Copper Smelter Plant</td><td>TPA</td><td>4,50,000</td></tr> <tr><td>2</td><td>Copper Refinery Plant</td><td>TPA</td><td>5,00,000</td></tr> <tr><td>3</td><td>Continuous Cast Copper Rod Plant</td><td>TPA</td><td>2,50,000</td></tr> <tr><td>4</td><td>Copper Scrap & E-Scrap Melting Facility</td><td>TPA</td><td>50,000</td></tr> <tr><td>5</td><td>Sulphuric Acid Plant</td><td>TPA</td><td>15,00,000</td></tr> <tr><td>6</td><td>Phosphoric Acid Plant (100% P₂O₅)</td><td>TPA</td><td>2,50,000</td></tr> <tr><td>7</td><td>Aluminium Fluoride Plant</td><td>TPA</td><td>15,000</td></tr> <tr><td>8</td><td>Oxygen (Industrial) Plant</td><td>TPM</td><td>48,000</td></tr> <tr><td>9</td><td>Precious Metal Recovery Plant</td><td></td><td></td></tr> <tr><td>a</td><td>Gold</td><td>TPA</td><td>50</td></tr> <tr><td>b</td><td>Silver</td><td>TPA</td><td>500</td></tr> <tr><td>c</td><td>Selenium</td><td>TPA</td><td>192</td></tr> <tr><td>10</td><td>Waste Heat recovery boiler based power plant</td><td>MW</td><td>20</td></tr> </tbody> </table> | Sr. No. | Plant | Unit | Proposed Amendment in Capacity | 1 | Copper Smelter Plant | TPA | 4,50,000 | 2 | Copper Refinery Plant | TPA | 5,00,000 | 3 | Continuous Cast Copper Rod Plant | TPA | 2,50,000 | 4 | Copper Scrap & E-Scrap Melting Facility | TPA | 50,000 | 5 | Sulphuric Acid Plant | TPA | 15,00,000 | 6 | Phosphoric Acid Plant (100% P ₂ O ₅) | TPA | 2,50,000 | 7 | Aluminium Fluoride Plant | TPA | 15,000 | 8 | Oxygen (Industrial) Plant | TPM | 48,000 | 9 | Precious Metal Recovery Plant | | | a | Gold | TPA | 50 | b | Silver | TPA | 500 | c | Selenium | TPA | 192 | 10 | Waste Heat recovery boiler based power plant | MW | 20 |
| Sr. No. | Plant | Units | Capacity as per EC Granted | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Copper Smelter Plant | TPA | 9,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Copper Refinery Plant | TPA | 10,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Continuous Cast Copper Rod Plant | TPA | 5,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Copper Scrap & E-Scrap Melting Facility | TPA | 1,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Sulphuric Acid Plant | TPA | 30,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Phosphoric Acid Plant (100% P ₂ O ₅) | TPA | 5,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Aluminum Fluoride Plant | TPA | 30,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Oxygen (Industrial) Plant | TPM | 96,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Precious Metal Recovery Plant | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| a | Gold | TPA | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b | Silver | TPA | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| c | Selenium ⁸ | TPA | 288 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Waste Heat recovery boiler based power plant | MW | 40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sr. No. | Plant | Unit | Proposed Amendment in Capacity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Copper Smelter Plant | TPA | 4,50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Copper Refinery Plant | TPA | 5,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Continuous Cast Copper Rod Plant | TPA | 2,50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Copper Scrap & E-Scrap Melting Facility | TPA | 50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Sulphuric Acid Plant | TPA | 15,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Phosphoric Acid Plant (100% P ₂ O ₅) | TPA | 2,50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Aluminium Fluoride Plant | TPA | 15,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Oxygen (Industrial) Plant | TPM | 48,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Precious Metal Recovery Plant | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| a | Gold | TPA | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b | Silver | TPA | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| c | Selenium | TPA | 192 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Waste Heat recovery boiler based power plant | MW | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | <p>The proposed capacity for different products for new site area as below:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Products</th> <th>Units</th> <th>Capacity as per EC Granted</th> </tr> </thead> <tbody> <tr><td>I</td><td>Main Products</td><td></td><td></td></tr> <tr><td>1</td><td>Copper Cathode</td><td>TPA</td><td>10,00,000</td></tr> <tr><td>2</td><td>Sulphuric Acid (> 98%)</td><td>TPA</td><td>30,00,000</td></tr> <tr><td>3</td><td>Continuous Cast Copper Wire Rod</td><td>TPA</td><td>5,00,000</td></tr> <tr><td>4</td><td>Gold</td><td>TPA</td><td>50</td></tr> <tr><td>5</td><td>Silver</td><td>TPA</td><td>500</td></tr> <tr><td>6</td><td>Phosphoric Acid (as 100% P₂O₅)</td><td>TPA</td><td>5,00,000</td></tr> <tr><td>7</td><td>Aluminum Fluoride</td><td>TPA</td><td>30,000</td></tr> <tr><td>II</td><td>By-Products</td><td></td><td></td></tr> <tr><td>8</td><td>Anode Slime</td><td>TPM</td><td>500</td></tr> <tr><td>9</td><td>Selenium</td><td>TPM</td><td>24</td></tr> <tr><td>10</td><td>Platinum Group Metal (PGM) Concentrate</td><td>TPM</td><td>6</td></tr> <tr><td>11</td><td>Ferro Sand/ Iron Silicate - Copper Slag (Granulated)</td><td>TPM</td><td>1,72,761</td></tr> </tbody> </table> | Sr. No. | Products | Units | Capacity as per EC Granted | I | Main Products | | | 1 | Copper Cathode | TPA | 10,00,000 | 2 | Sulphuric Acid (> 98%) | TPA | 30,00,000 | 3 | Continuous Cast Copper Wire Rod | TPA | 5,00,000 | 4 | Gold | TPA | 50 | 5 | Silver | TPA | 500 | 6 | Phosphoric Acid (as 100% P ₂ O ₅) | TPA | 5,00,000 | 7 | Aluminum Fluoride | TPA | 30,000 | II | By-Products | | | 8 | Anode Slime | TPM | 500 | 9 | Selenium | TPM | 24 | 10 | Platinum Group Metal (PGM) Concentrate | TPM | 6 | 11 | Ferro Sand/ Iron Silicate - Copper Slag (Granulated) | TPM | 1,72,761 | <p>The proposed capacity for different products for new site area as below:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Products</th> <th>Units</th> <th>Proposed Amendment in Capacity</th> </tr> </thead> <tbody> <tr><td>I</td><td>Main Products</td><td></td><td></td></tr> <tr><td>1</td><td>Copper Cathode</td><td>TPA</td><td>5,00,000</td></tr> <tr><td>2</td><td>Sulphuric Acid (> 98%)</td><td>TPA</td><td>15,00,000</td></tr> <tr><td>3</td><td>Continuous Cast Copper Wire Rod</td><td>TPA</td><td>2,50,000</td></tr> <tr><td>4</td><td>Gold</td><td>TPA</td><td>50</td></tr> <tr><td>5</td><td>Silver</td><td>TPA</td><td>500</td></tr> <tr><td>6</td><td>Phosphoric Acid (as 100% P₂O₅)</td><td>TPA</td><td>2,50,000</td></tr> <tr><td>7</td><td>Aluminum Fluoride</td><td>TPA</td><td>15,000</td></tr> <tr><td>II</td><td>By-Products</td><td></td><td></td></tr> <tr><td>8</td><td>Anode Slime</td><td>TPM</td><td>250</td></tr> <tr><td>9</td><td>Selenium</td><td>TPM</td><td>16</td></tr> <tr><td>10</td><td>Platinum Group Metal (PGM) Concentrate</td><td>TPM</td><td>4</td></tr> <tr><td>11</td><td>Ferro Sand/ Iron Silicate - Copper Slag (Granulated)</td><td>TPM</td><td>86,380</td></tr> </tbody> </table> | Sr. No. | Products | Units | Proposed Amendment in Capacity | I | Main Products | | | 1 | Copper Cathode | TPA | 5,00,000 | 2 | Sulphuric Acid (> 98%) | TPA | 15,00,000 | 3 | Continuous Cast Copper Wire Rod | TPA | 2,50,000 | 4 | Gold | TPA | 50 | 5 | Silver | TPA | 500 | 6 | Phosphoric Acid (as 100% P ₂ O ₅) | TPA | 2,50,000 | 7 | Aluminum Fluoride | TPA | 15,000 | II | By-Products | | | 8 | Anode Slime | TPM | 250 | 9 | Selenium | TPM | 16 | 10 | Platinum Group Metal (PGM) Concentrate | TPM | 4 | 11 | Ferro Sand/ Iron Silicate - Copper Slag (Granulated) | TPM | 86,380 |
| Sr. No. | Products | Units | Capacity as per EC Granted | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | Main Products | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Copper Cathode | TPA | 10,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Sulphuric Acid (> 98%) | TPA | 30,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Continuous Cast Copper Wire Rod | TPA | 5,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Gold | TPA | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Silver | TPA | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Phosphoric Acid (as 100% P ₂ O ₅) | TPA | 5,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Aluminum Fluoride | TPA | 30,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| II | By-Products | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Anode Slime | TPM | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Selenium | TPM | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Platinum Group Metal (PGM) Concentrate | TPM | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Ferro Sand/ Iron Silicate - Copper Slag (Granulated) | TPM | 1,72,761 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sr. No. | Products | Units | Proposed Amendment in Capacity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | Main Products | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Copper Cathode | TPA | 5,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Sulphuric Acid (> 98%) | TPA | 15,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Continuous Cast Copper Wire Rod | TPA | 2,50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Gold | TPA | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Silver | TPA | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Phosphoric Acid (as 100% P ₂ O ₅) | TPA | 2,50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Aluminum Fluoride | TPA | 15,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| II | By-Products | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Anode Slime | TPM | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Selenium | TPM | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Platinum Group Metal (PGM) Concentrate | TPM | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Ferro Sand/ Iron Silicate - Copper Slag (Granulated) | TPM | 86,380 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| EC Para No. | Details as per EC Granted | | | | Proposed Amendment in EC | | | |
|-------------|--|---|-----|----------|---|---|-----|----------|
| | 12 | Phosphogypsum | TPM | 2,08,334 | 12 | Phosphogypsum | TPM | 1,04,167 |
| | 13 | Hydro Fluro Silicic Acid (~20% as H ₂ SiF ₆) | TPM | 2,500 | 13 | Hydro Fluro Silicic Acid (~20% as H ₂ SiF ₆) | TPM | 1,250 |
| | 14 | Copper Telluride | TPM | 42 | 14 | Copper Telluride | TPM | 21 |
| | 15 | Tellurium | TPM | 8 | 15 | Tellurium | TPM | 4 |
| | 16 | Nickel | TPM | 16 | 16 | Nickel | TPM | 8 |
| | 17 | Bismuth Bisulphate | TPM | 120 | 17 | Bismuth Bisulphate | TPM | 60 |
| | 18 | Calomel (Mercury Chloride) | TPM | 18 | 18 | Calomel (Mercury Chloride) | TPM | 9 |
| | 19 | Mercury | TPM | 16 | 19 | Mercury | TPM | 8 |
| | 20 | CCR Mill Scale | TPM | 50 | 20 | CCR Mill Scale | TPM | 25 |
| 5 | <p>The total land required for the project is 256.58 ha, out of which 154.19 ha is non-forest land already notified as SEZ and is in the possession of APSEZ, 102.39 ha forest land applied for diversion by APSEZ for which Stage 1 clearance has been granted in Nov 2018. Project proponent has provided MoU with APSEZ; that the proposed land will be provided by APSEZ for this project after receiving necessary clearances. The proposed project is outside the CRZ. The Dhaneswari (DanesriNadi) River passes through the project area, which will maintained. A greenbelt along with a safety zone (towards river bank with gabion, gully plugs to avoid erosion of the bank, if any) of 15 meter wide will be developed along the sides of the Dhaneswari (DanesriNadi) River.</p> | | | | <p>The total land required for the project is 136.75 ha, which is existing within notified SEZ Mundra of APSEZ. Project proponent has provided MoU with APSEZ for leasing the land. The proposed project is outside the CRZ. The Dhaneswari (Danesri Nadi) River passes alongside of the project area, which will be maintained. A greenbelt along with a safety zone (towards river bank with gabion, gully plugs to avoid erosion of the bank, if any) of 15 meter wide will be developed along the sides of the Dhaneswari (Danesri Nadi) River.</p> | | | |
| 6 | <p>The topography of the area is flat and slightly undulating and ranges between 22°48'13.26"N to 22°50'01.88"N Latitude and 69°33'34.74"E to 69°35'08.42"E Longitude in Survey of India topo sheet No. F42J9 & 10, at an elevation of 7-10 m AMSL. The ground water table ranges between 2-10 m below the land surface during the post-monsoon season and 2-20 m below the land surface during the pre-monsoon season. The stage of groundwater development in Mundra Taluka is reported to be 63.28% and designated as safe areas as per Technical Report Series, Ground Water Brochure of Kutch District by CGWB – 2013. No groundwater is proposed for either construction or operation phase of the project.</p> | | | | <p>The topography of the area is flat and slightly undulating and ranges between 22°48'56.80"N to 22°49'50.53"N Latitude and 69°34'09.05"E to 69°35'14.26"E Longitude in Survey of India toposheet No. F42J9 & 10, at an elevation of 7-10 m AMSL. The ground water table ranges between 2-10 m below the land surface during the post-monsoon season and 2-20 m below the land surface during the pre-monsoon season. The stage of groundwater development in Mundra Taluka is reported to be 63.28% and designated as safe areas as per Technical Report Series, Ground Water Brochure of Kutch District by CGWB – 2013. No groundwater is proposed for either construction or operation phase of the project.</p> | | | |
| 7 | <p>No national park/wildlife sanctuary/biosphere reserve/tiger reserve, etc. are reported to be located within the study area i.e. within 10 km from the boundary of the project site. The area also does not report to form corridor for Schedule-I fauna. Floral species are mainly dominated by Prosopis juliflora and Acacia Senegal. The faunal species were categorized as per conservation status of Wildlife Protection Act, 1972 and reveals presence of</p> | | | | <p>No national park/wildlife sanctuary/biosphere reserve/tiger reserve, etc. are reported to be located within the study area i.e. within 10 km from the boundary of the project site. The area also does not report to form corridor for Schedule-I fauna. Floral species are mainly dominated by Prosopis juliflora and Acacia Senegal. The faunal species were categorized as per conservation status of Wildlife Protection Act, 1972 and reveals</p> | | | |

| EC Para No. | Details as per EC Granted | | | | | | Proposed Amendment in EC | | | | | |
|-------------|---|--|-------------|-----------------------------------|-------------------|--------------------------|---|--|-------------|---------------------------------------|-------------------|--------------------------|
| | Schedule-I species including peacock in the study area. Mapping of mangroves present in the study area has been carried out. Closest mangrove distribution is located at 170 metres (on bank of Kotdi –II creek) from Southern most boundary of the proposed project site. Wildlife management and mangrove conservation plan has been proposed with outlay of Rs.372 Lakhs. This outlay for conservation also includes intervention proposed for mudflats conservation. | | | | | | presence of Schedule -I species including peacock in the study area. Mapping of mangroves present in the study area has been carried out. Closest mangrove distribution is located at more than 650 metres distance (on bank of Kotdi –II creek) from Southern most boundary of the proposed project site. Wildlife management and mangrove conservation plan has been proposed with outlay of Rs.372 Lakhs. This outlay for conservation also includes intervention proposed for mudflats conservation. | | | | | |
| 8 | The raw material requirement and it's handling system in the proposed project is as given below: | | | | | | The raw material requirement and it's handling system in the proposed project is as given below: | | | | | |
| | Sr. No | Raw Materials | Unit | Quantity as per EC Granted | Storage | Mode of Transport | Sr. No. | Raw Materials | Unit | Proposed Amendment in Quantity | Storage | Mode of Transport |
| | 1 | Copper Concentrate | TPA | 31,42,924 | Covered Warehouse | Pipe Conveyor Road | 1 | Copper Concentrate | TPA | 15,71,462 | Covered Warehouse | Pipe Conveyor / Road |
| | 2 | Copper Content in Copper Scrap & E-Scrap | TPA | 2,08,402 | Covered Warehouse | Container Road | 2 | Copper Content in Copper Scrap & E-Scrap | TPA | 1,04,201 | Covered Warehouse | Container / Road |
| | 3 | Rock Phosphate | TPA | 17,50,000 | Covered Warehouse | Pipe Conveyor Road | 3 | Rock Phosphate | TPA | 8,75,000 | Covered Warehouse | Pipe Conveyor / Road |
| | 4 | Aluminium Hydrate | TPA | 37,500 | Covered Warehouse | Road | 4 | Aluminium Hydrate | TPA | 18,750 | Covered Warehouse | Road |
| | 5 | Silica Sand | TPA | 3,14,292 | Covered Warehouse | Road | 5 | Silica Sand | TPA | 157,146 | Covered Warehouse | Road |
| | 6 | Quartz | TPA | 1,41,432 | Covered Warehouse | Road | 6 | Quartz | TPA | 70,716 | Covered Warehouse | Road |
| | 7 | Limestone | TPA | 78,573 | Covered Warehouse | Road | 7 | Limestone | TPA | 39,287 | Covered Warehouse | Road |
| | 8 | Quick Lime | TPA | 60,000 | Covered Warehouse | Road | 8 | Quick Lime | TPA | 30,000 | Covered Warehouse | Road |

| EC Para No. | Details as per EC Granted | Proposed Amendment in EC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|--------------------------|--------------------------------|---------------------------------------|----------------------------|---------|-------------------|---|--|-----------------|-------|--------------------------------|----------------|---|---------------------------------------|-----|-------|---------------------------------------|------|---|-------------------|------|-----|---------------------------------------|------|---|------------|-----|-----|--------------------------|------|---|----------------|-------|------|--------------------------------|---------|--|--|------|------|--------------------------------|---------|---------------------------------------|-----|---------|--------------|----|-----------------------|----------------|-----|-------------|-----|------------|---------------------------------------|------|--------------------------|-------------------|------|----|---------------------------------------|------|---|----------|-----|----|--------------|------|---|----------------|-----|----|--------------|------|
| 9 | <p>The fuel requirement and its handling system in the proposed project is as given below:</p> <table border="1"> <thead> <tr> <th>Sr. No</th> <th>Fuel</th> <th>Unit</th> <th>Quantity as per EC Granted</th> <th>Storage</th> <th>Mode of Transport</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>LPG/PNG</td> <td>TPD</td> <td>100</td> <td>As per PESO Guideline</td> <td>Road/ Pipeline</td> </tr> <tr> <td>2</td> <td>Furnace Oil</td> <td>TPD</td> <td>300</td> <td>Carbon Steel (CS) tank with roof cone</td> <td>Road</td> </tr> <tr> <td>3</td> <td>High Speed Diesel</td> <td>KLPD</td> <td>50</td> <td>Carbon Steel (CS) tank with roof cone</td> <td>Road</td> </tr> <tr> <td>4</td> <td>Met Coke</td> <td>TPD</td> <td>100</td> <td>Covered Shed</td> <td>Road</td> </tr> <tr> <td>5</td> <td>Coal/ Pet Coke</td> <td>TPD</td> <td>100</td> <td>Covered Shed</td> <td>Road</td> </tr> </tbody> </table> | Sr. No | Fuel | Unit | Quantity as per EC Granted | Storage | Mode of Transport | 1 | LPG/PNG | TPD | 100 | As per PESO Guideline | Road/ Pipeline | 2 | Furnace Oil | TPD | 300 | Carbon Steel (CS) tank with roof cone | Road | 3 | High Speed Diesel | KLPD | 50 | Carbon Steel (CS) tank with roof cone | Road | 4 | Met Coke | TPD | 100 | Covered Shed | Road | 5 | Coal/ Pet Coke | TPD | 100 | Covered Shed | Road | <p>The fuel requirement and its handling system in the proposed project is as given below:</p> <table border="1"> <thead> <tr> <th>Sr. No</th> <th>Fuel</th> <th>Unit</th> <th>Proposed Amendment in Quantity</th> <th>Storage</th> <th>Mode of Transport</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>LPG/PNG</td> <td>TPD</td> <td>55</td> <td>As per PESO Guideline</td> <td>Road/ Pipeline</td> </tr> <tr> <td>2</td> <td>Furnace Oil</td> <td>TPD</td> <td>150</td> <td>Carbon Steel (CS) tank with roof cone</td> <td>Road</td> </tr> <tr> <td>3</td> <td>High Speed Diesel</td> <td>KLPD</td> <td>25</td> <td>Carbon Steel (CS) tank with roof cone</td> <td>Road</td> </tr> <tr> <td>4</td> <td>Met Coke</td> <td>TPD</td> <td>50</td> <td>Covered Shed</td> <td>Road</td> </tr> <tr> <td>5</td> <td>Coal/ Pet Coke</td> <td>TPD</td> <td>50</td> <td>Covered Shed</td> <td>Road</td> </tr> </tbody> </table> | Sr. No | Fuel | Unit | Proposed Amendment in Quantity | Storage | Mode of Transport | 1 | LPG/PNG | TPD | 55 | As per PESO Guideline | Road/ Pipeline | 2 | Furnace Oil | TPD | 150 | Carbon Steel (CS) tank with roof cone | Road | 3 | High Speed Diesel | KLPD | 25 | Carbon Steel (CS) tank with roof cone | Road | 4 | Met Coke | TPD | 50 | Covered Shed | Road | 5 | Coal/ Pet Coke | TPD | 50 | Covered Shed | Road |
| Sr. No | Fuel | Unit | Quantity as per EC Granted | Storage | Mode of Transport | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | LPG/PNG | TPD | 100 | As per PESO Guideline | Road/ Pipeline | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Furnace Oil | TPD | 300 | Carbon Steel (CS) tank with roof cone | Road | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | High Speed Diesel | KLPD | 50 | Carbon Steel (CS) tank with roof cone | Road | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Met Coke | TPD | 100 | Covered Shed | Road | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Coal/ Pet Coke | TPD | 100 | Covered Shed | Road | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sr. No | Fuel | Unit | Proposed Amendment in Quantity | Storage | Mode of Transport | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | LPG/PNG | TPD | 55 | As per PESO Guideline | Road/ Pipeline | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Furnace Oil | TPD | 150 | Carbon Steel (CS) tank with roof cone | Road | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | High Speed Diesel | KLPD | 25 | Carbon Steel (CS) tank with roof cone | Road | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Met Coke | TPD | 50 | Covered Shed | Road | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Coal/ Pet Coke | TPD | 50 | Covered Shed | Road | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | <p>During the manufacturing process, following waste will be generated, which will be recycled in the process or will be sent to authorised recyclers:</p> <table border="1"> <thead> <tr> <th>Sr. No</th> <th>Waste</th> <th>Unit</th> <th>Quantity as per EC Granted</th> <th>Storage</th> <th>Mode of Transport</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Nickel Sulphate/ Nickel Carbonate Sludge</td> <td>TPA</td> <td>1,860</td> <td>Covered Shed</td> <td>Road</td> </tr> <tr> <td>2</td> <td>Copper Arsenate and Arsenical Cathode</td> <td>TPA</td> <td>2,130</td> <td>Covered Shed</td> <td>Road</td> </tr> <tr> <td>3</td> <td>Used Oil</td> <td>KLA</td> <td>200</td> <td>Tank</td> <td>Road</td> </tr> <tr> <td>4</td> <td>Oil Sludge</td> <td>TPA</td> <td>50</td> <td>Steel/ Plastic Container</td> <td>Road</td> </tr> </tbody> </table> | Sr. No | Waste | Unit | Quantity as per EC Granted | Storage | Mode of Transport | 1 | Nickel Sulphate/ Nickel Carbonate Sludge | TPA | 1,860 | Covered Shed | Road | 2 | Copper Arsenate and Arsenical Cathode | TPA | 2,130 | Covered Shed | Road | 3 | Used Oil | KLA | 200 | Tank | Road | 4 | Oil Sludge | TPA | 50 | Steel/ Plastic Container | Road | <p>During the manufacturing process, following waste will be generated, which will be recycled in the process or will be sent to authorised recyclers:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Waste</th> <th>Unit</th> <th>Proposed Amendment in Quantity</th> <th>Storage</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Nickel Sulphate/ Nickel Carbonate Sludge</td> <td>TPA</td> <td>930</td> <td>Covered Shed</td> </tr> <tr> <td>2</td> <td>Copper Arsenate and Arsenical Cathode</td> <td>TPA</td> <td>1,065</td> <td>Covered Shed</td> </tr> <tr> <td>3</td> <td>Used Oil</td> <td>KLPA</td> <td>100</td> <td>Tank</td> </tr> <tr> <td>4</td> <td>Oil Sludge</td> <td>TPA</td> <td>25</td> <td>Steel/ Plastic Container</td> </tr> </tbody> </table> | Sr. No. | Waste | Unit | Proposed Amendment in Quantity | Storage | 1 | Nickel Sulphate/ Nickel Carbonate Sludge | TPA | 930 | Covered Shed | 2 | Copper Arsenate and Arsenical Cathode | TPA | 1,065 | Covered Shed | 3 | Used Oil | KLPA | 100 | Tank | 4 | Oil Sludge | TPA | 25 | Steel/ Plastic Container | | | | | | | | | | | | | | | | | |
| Sr. No | Waste | Unit | Quantity as per EC Granted | Storage | Mode of Transport | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Nickel Sulphate/ Nickel Carbonate Sludge | TPA | 1,860 | Covered Shed | Road | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Copper Arsenate and Arsenical Cathode | TPA | 2,130 | Covered Shed | Road | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Used Oil | KLA | 200 | Tank | Road | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Oil Sludge | TPA | 50 | Steel/ Plastic Container | Road | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sr. No. | Waste | Unit | Proposed Amendment in Quantity | Storage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Nickel Sulphate/ Nickel Carbonate Sludge | TPA | 930 | Covered Shed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Copper Arsenate and Arsenical Cathode | TPA | 1,065 | Covered Shed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Used Oil | KLPA | 100 | Tank | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Oil Sludge | TPA | 25 | Steel/ Plastic Container | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | <p>During the manufacturing process, following Hazardous waste will be generated and will be stored in Secured Landfill (SLF) designed in accordance with CPCB Guidelines:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Hazardous Waste</th> <th>Unit</th> <th>Quantity as per EC Granted</th> <th>Storage</th> <th>Mode of Transport</th> </tr> </thead> <tbody> </tbody> </table> | Sr. No. | Hazardous Waste | Unit | Quantity as per EC Granted | Storage | Mode of Transport | <p>During the manufacturing process, following Hazardous waste will be generated and will be stored in Secured Landfill (SLF) designed in accordance with CPCB Guidelines:</p> <table border="1"> <thead> <tr> <th>Sr. No</th> <th>Hazardous Waste</th> <th>Unit</th> <th>Proposed Amendment in Quantity</th> <th>Storage</th> </tr> </thead> <tbody> </tbody> </table> | Sr. No | Hazardous Waste | Unit | Proposed Amendment in Quantity | Storage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sr. No. | Hazardous Waste | Unit | Quantity as per EC Granted | Storage | Mode of Transport | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sr. No | Hazardous Waste | Unit | Proposed Amendment in Quantity | Storage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| EC Para No. | Details as per EC Granted | | | | | | Proposed Amendment in EC | | | | | |
|-------------|--|---|-----|--------|-------------------------|---------------|--------------------------|---|------|--------|-------------------------|--------|
| | | | | d | | | 1 | Arsenic Bearing ETP sludge | TPA | 21,674 | Secured Land Fill (SLF) | Cov Tr |
| | 1 | Arsenic Bearing ETP sludge | TPA | 43,348 | Secured Land Fill (SLF) | Covered Truck | 2 | Spent Catalyst from Sulphuric Acid Plant | KLPA | 200 | Secured Land Fill (SLF) | Tr |
| | 2 | Spent Catalyst from Sulphuric Acid Plant | KLA | 400 | Secured Land Fill (SLF) | Truck | 3 | Spent resins from DM, RO & Refinery Plant | KLPA | 10 | Secured Land Fill (SLF) | Tr |
| | 3 | Spent resins from DM, RO & Refinery Plant | KLA | 20 | Secured Land Fill (SLF) | Truck | 4 | Slats from Multi Effect Evaporator/ MVR | TPA | 4,620 | Secured Land Fill (SLF) | Tr |
| | 4 | Slats from Multi Effect Evaporator/ MVR | TPA | 9,240 | Secured Land Fill (SLF) | Truck | | | | | | |
| 12 | The proposed project to adopt pyrosmelting technology and electro refining process to produce copper cathode. The sulphur dioxide generated during the smelting of copper concentrate is converted into sulphuric acid by Double Conversion Double Absorption (DCDA) process. Part of the sulphuric acid is utilized for production of phosphoric acid within the plant. Secondary gases from the smelter plant and tail gases from sulphuric acid plant will be treated in flue gas desulfurization (FGD) system based on SO ₂ Abatement technology/ system; Regenerative absorption solvent technology and Lime slurry scrubbing system. | | | | | | No Change | | | | | |
| 13 | Copper Concentrate will be largely imported from various countries across the globe such as Chile, Peru, Brazil, Australia, Africa, Indonesia, etc. and Rock Phosphate is imported from countries like Jordan, Morocco, Australia, Israel, Senegal, etc. Copper Concentrate & Rock Phosphate will be unloaded from the ship and transported to the covered warehouse either by pipe conveyor system or through covered trucks. The principal raw material for the production of copper metal is copper concentrate blend containing about 25-35% copper, 25-34% sulphur, iron 25-35% and 7-10% moisture. Approximately, 3 LTPA copper scrap and electronic scrap is also used as input to proposed copper smelting plant, copper scrap & E-Scrap melting facility. | | | | | | No Change | | | | | |
| 14 | The major steps in copper extraction are as follows: <ul style="list-style-type: none"> Blending of different grades of concentrates. Smelting of concentrate in flash smelting furnace to produce an intermediate copper rich product known as “matte” containing 58 - 63% copper. | | | | | | No Change | | | | | |

| EC Para No. | Details as per EC Granted | Proposed Amendment in EC |
|-------------|---|--------------------------|
| | <ul style="list-style-type: none"> • Converting of liquid matte to blister copper (98 - 99% Cu) in Pierce-Smith converter. • Copper slag from flash smelting furnace and PS Converter will be further treated to recover copper through electric furnace and slag cleaning furnace. • Fire refining of blister copper to produce anode copper (99.5% Cu) in anode furnace and casting of the anodes and • Electrolytic refining of anodes to produce copper cathodes (99.99% Cu). | |
| 15 | <p>In the process of extraction of copper metal, sulphuric acid is recovered as a by-product from the off-gases generated from the smelting and converting furnaces. A part of sulphuric acid produced is utilized for phosphoric acid production and rest will be sold in the market based on market requirement. Phosphoric Acid (PA) Plant uses sulphuric acid produced within the plant and imported rock phosphate to produce Phosphoric Acid. Phosphoric Acid is largely used in fertiliser industries to make phosphatic fertilisers. During the phosphoric acid manufacturing process fluorine gases scrubbed with water to recover as hydro fluoro silicic acid (FSA) through scrubbing system. FSA is one of the major raw materials for production of Fluoride based chemicals. Hydro fluoro silicic acid generated from phosphoric acid plant will be partly sold to fluoride based industries and rest will be converted in value added Aluminum Fluoride. Aluminum Fluoride plant will be using FSA produced in PA Plant and Aluminum Hydrate to produce Aluminum Fluoride. Aluminum Fluoride is an important material in production of Aluminum Metal. Aluminum fluoride produced will be sold to aluminum manufacturing companies. The precious metal in the form of anode slime is collected during electrolytic refining of copper will be processed to produce gold, silver and Platinum Group of Metals (PGM) concentrate as well as recovery of minor metals such as Tellurium, Bismuth, Nickel, etc). The copper cathode produced from copper refinery will be melted and drawn in the form of copper wire rod on continuous basis from a continuous casting and rolling machine. Copper rod will be of various sizes as per market requirement such as 8 to 32 mm.</p> | No Change |
| 16 | <p>The wastewater generated from copper smelter, sulphuric acid plant, copper refinery, Phosphoric Acid Plant and Aluminum Fluoride plant will be treated in state of art effluent treatment facility. Plant is designed on Zero Liquid Discharge concept and hence no process or treated water will be discharged outside the plant boundary. Treated effluent will be reused within the plant</p> | No Change |

| EC Para No. | Details as per EC Granted | Proposed Amendment in EC |
|-------------|---|--|
| | operations; excess if any will be sent ZLD facility comprising of a Reverse Osmosis plant and rejects from RO plant will be handled in Multi effect evaporator/MVR system to achieve ZLD. Product from RO plant will be recycled to copper refinery plant to reduce the fresh water consumption. Rainwater harvesting and storm water management system will be put in place. | |
| 17 | <p>The targeted production capacity of the proposed project is 1.0 MTPA. The major technological units envisaged for the copper refinery project are as given below:</p> <ul style="list-style-type: none"> ▪ Raw material handling system ▪ Flash Smelting furnace ▪ Pierce smith converter ▪ Electric Furnace ▪ Ferro Sand Cleaning Furnace (FSCF) ▪ Copper scrap & E-scrap melting system ▪ Anode furnace & anode casting wheel ▪ Off gas handling ▪ Sulphuric acid plant ▪ Oxygen plant ▪ Copper Refinery Plant ▪ Precious metal recovery plant ▪ Continuous cast copper wire rod plant ▪ Phosphoric acid plant ▪ Aluminum fluoride plant ▪ Flue gas desulfurization Unit and ▪ Effluent Treatment Plant (ETP) ▪ Utilities like Power, Water, Air and Fuel | <p>The targeted production capacity of the proposed project is 500 KTPA. The major technological units envisaged for the copper refinery project are as given below:</p> <ul style="list-style-type: none"> ▪ Raw material handling system ▪ Flash Smelting furnace ▪ Pierce smith converter ▪ Electric Furnace ▪ Ferro Sand Cleaning Furnace (FSCF) ▪ Copper scrap & E-scrap melting system ▪ Anode furnace & anode casting wheel ▪ Off gas handling ▪ Sulphuric acid plant ▪ Oxygen plant ▪ Copper Refinery Plant ▪ Precious metal recovery plant ▪ Continuous cast copper wire rod plant ▪ Phosphoric acid plant ▪ Aluminium fluoride plant ▪ Flue gas desulfurization Unit and ▪ Effluent Treatment Plant (ETP) ▪ Utilities like Power, Water, Air and Fuel |
| 18 | The water requirement of the project is estimated as approx. 29,700 m³/day of fresh water requirement will be obtained from the desalination plant of Adani Port Special Economic Zone (APSEZ). Approx. 4,400 m³/day treated water from ETP & STP will be utilized for plant operation. No groundwater shall be used for either construction or operation phase of the project. | The water requirement of the project is estimated as approx. 14,701 m³/day of fresh water requirement will be obtained from the desalination plant of Adani Port Special Economic Zone (APSEZ). Approx. 2,261 m³/day treated water from ETP & STP will be utilized for plant operation. No groundwater shall be used for either construction or operation phase of the project. |
| 19 | The power requirement of the project is estimated as 300 MW , out of which 260 MW will be obtained from the APSEZ through MUPL and 40 MW would be generated from waste heat recovery system. | The power requirement of the project is estimated as 150 MW , out of which 130 MW will be obtained from the APSEZ through MUPL and 20 MW would be generated from waste heat recovery system. |
| 20 | Baseline Environmental Studies were conducted during post-monsoon and partly winter season i.e. from 1 st October to 31 st December, 2016. Ambient air quality monitoring has been carried out at eight locations and the data indicated: PM ₁₀ (35.2 to 84.2 µg/m ³), PM _{2.5} (19.2 to 43.9 µg/m ³), SO ₂ (14.8 to 42.6 µg/m ³) and NO _x (13.1 to 32.8 µg/m ³). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 0.52 µg/m ³ with respect to the PM _{2.5} , 1.27 µg/m ³ with respect to the PM ₁₀ , 10.37 µg/m ³ with respect to the | No Change |

| EC Para No. | Details as per EC Granted | Proposed Amendment in EC |
|-------------|---|--|
| | SO ₂ and 0.23 µg/m ³ with respect to the NO _x . | |
| 21 | Ground water quality has been monitored in eight locations in the study area and analysed. pH: 7.3 to 7.8, Total Hardness: 125 to 392 mg/l, Chlorides: 282.6 to 978.4 mg/l, Fluoride: 0.9 to 1.5 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 4 locations. pH: 7.2 to 8.0; DO: 5.6 to 5.9 mg/l and BOD: <3 mg/l. COD from 60 to 80 mg/l. | No Change |
| 22 | Noise levels are in the range of 48.5 to 56.6 dB(A) for daytime and 42.3 to 48.8 dB(A) for night time. | No Change |
| 23 | It has been reported that approx. 53,000 tons per annum of waste will be generated due to the project, out of which approx. 7,300 tonnes per annum will be recycled through authorised recyclers and within the process. Rest will be stored in the secured landfill (SLF). It has been envisaged that an area of 89.8 ha will be developed as green belt around the project facilities to attenuate the noise levels and trap the dust generated due to the project development activities. | It has been reported that approx. 26,500 tons per annum of waste will be generated due to the project, out of which approx. 3,650 tonnes per annum will be recycled through authorised recyclers and within the process. Rest will be stored in the secured landfill (SLF). It has been envisaged that an area of 46.34 ha will be developed as green belt around the project facilities to attenuate the noise levels and trap the dust generated due to the project development activities. |
| 24 | It has been reported that the Consent to Establish/Consent to operate from the Gujarat State Pollution Control Board / Pollution Control Committee will be obtained as per applicable requirements after obtaining the Environmental Clearance. | No Change |
| 25 | The capital cost of the project is Rs. 10,000 Crores and the capital cost for environmental protection measures is proposed as Rs. 1050.11 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 52.75 Crores. | The capital cost of the project is Rs. 6,250 Crores and the capital cost for environmental protection measures is proposed as Rs. 625 Crores . The annual recurring cost towards the environmental protection measures is proposed as Rs. 27 Crores . |
| 26 | During operation phase, employment generation from the proposed project will be for 5,000 number of people through direct and indirect employment | During operation phase, employment generation from the proposed project will be for 2,500 number of people through direct and indirect employment |
| 27 | The Public hearing of the project was held on 29 th April 2017 at Community Premises Centre Samajvadi Opposite Tunda Primary School, under the chairmanship of Additional District Magistrate and Resident Additional Collector for setting up of copper refinery plant of 1.0 MTPA. The issues raised during public hearing were mainly about Employment, Environmental Protection and Rural infrastructure. | No Change |
| 28 | In line with Office Memorandum dated 1 st May 2018 of MoEF&CC regarding Corporate Environment Responsibility, an amount of approx. Rs. 58.02 Cr has been earmarked for Corporate Environment Responsibility (CER) and allocated for relevant development programmes to address education, community health, Sustainable livelihood, Community environment and Community rural infrastructure issues | No Change |

| EC Para No. | Details as per EC Granted | Proposed Amendment in EC |
|-------------|---|--|
| | in the area based on public hearing issues and social impact assessment. | |
| 29 | Greenbelt will be developed in 89.80 ha which is about 35% of the total acquired area. Peripheral 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 | Greenbelt will be developed in 46.34 ha which is about 34% of the total acquired area. Peripheral 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. |
| 30 | The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity. | Original Appeal No. 35/2020 (WZ) in NGT, Western Zone, Pune filed on 29.07.2020 by Appellant Kheti Vikas Seva Trust |
| 31 | EIA Consultant Organisation: M/s. Vimta Labs, Hyderabad. | No Change |
| 32 | The proposal was considered in EAC meetings held during 9-11 th January 2019, 22-23 rd August 2019, 23-24 th December 2019 and 24-25 th February 2020. | No Change |

28.19.5 In addition to the above, the PP also sought for corrigendum to the EC dated 5/06/2020 on the following points.

| Sl. No. | EC Reference | Conditions of EC | Corrigendum Proposed for EC |
|------------|--|--|--|
| II | Air quality monitoring and preservation | | |
| (x) | Page 13; Section II, Point - x | Adopt measures to recover fluoride gas from electrolytic cells and recycle the same in the process. | <i>Not applicable for Copper Plant and hence need to be deleted.</i> |
| III | Water quality monitoring and preservation | | |
| (vii) | Page 13; Section III, Point - viii | The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water. | <i>The project proponent shall make efforts to minimise water consumption in the copper plant complex by segregation of used water, practicing cascade use and by recycling treated water.</i> |
| V | Energy Conservation measures | | |
| (i) | Page 14; Section V, Point - i | The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases. | <i>The project proponent shall provide waste heat recovery system at the flue gases.</i> |
| IX | Corporate Environment Responsibility | | |
| (iii) | Page 15; Section IX, Point - iii | A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organisation. | <i>A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organisation.</i> |
| (iv) | Page 15; Section IX, Point - iv | All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the | <i>All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the</i> |

| Sl. No. | EC Reference | Conditions of EC | Corrigendum Proposed for EC |
|---------|--------------|--|--|
| | | Aluminium Industry shall be implemented. | <i>Copper Industry shall be implemented.</i> |

28.19.6 Reason for seeking amendment in EC:

AEL has now decided to revise the capacity of the proposed Copper Refinery Plant project from One Million Ton per Annum to 500 KTPA (500 Kilo Ton per Annum i.e. 0.5 MTPA) due to following reasons:

- Investment required to set up the One Million Ton copper refinery plant in the current situation created due to impact of COVID-19
- It is difficult to set 1.0 MTPA (One Million Ton per Annum) Copper Refinery Project in 7 years' time, due to current situation created by COVID-19
- Focus of Govt. of India on "Atmanirbhar Bharat" and "Make in India"
- Govt of India's focus on renewables and E-Vehicle in compliance to Paris Climate Change Agreement and beyond
- Due to COVID-19 impact, various manufacturing facilities currently in China are actively working on to locate outside China and looking for India as a potential option strategically
- As per EAC's suggestions, AEL has explored to optimize the boundary and shape of the layout. The unutilized land parcels within the layout has been tied up, improving the layout
- Optimization of layout has also resulted in one compact block north of the road. The southern part, which is close to the creek system and the mangroves has been excluded from the layout
- Dhaneshwari river was passing through the earlier layout. The land on the west of the river Dhaneshwari has been excluded in the new proposed layout
- Optimization of layout by including adjacent land parcel, has made it possible to exclude forest land for the project. Layout has become more compact providing improvement in green cover & greenbelt and internal traffic movement.

Further, Amendment is mostly sought in the following due to reduction of capacity from 1.0 MTPA to 0.5 MTPA (i.e. 500 KTPA):

- Project / Plant configuration
- Capacity of Production
- Raw material Requirement & waste generation
- Water Consumption & waste water generation
- Exclusion of Forest area &
- Excluding Dhaneshwari River from Project site

28.19.7 Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration shall be furnished: Original Appeal No. 35/2020 (WZ) in NGT, Western Zone, Pune filed on 29.07.2020 by Appellant Khedi Vikas Seva Trust. The EC has challenged in NGT and Condonation of Delay filed by appellant and hearing is scheduled in February 2021.

28.19.8 Impact prediction and management plan along with fund provision for the proposed amendment (in case of amendment)

The proposal for EC amendment to reduce capacity from 1.0 MTPA (Million Ton Per Annum) to 0.5 MTPA (Million Ton Per Annum i.e. 500 Kilo Ton Per Annum - KTPA) and change in layout of the project by reduction of the land requirement and avoiding forest land. The pollution load will be reduced significantly due to proposed amendment.

| Sr. No. | Particulars | Unit | As per EC Granted (1.0 MTPA) | Proposed Amendment for EC (0.5 MTPA) |
|---------|---|---------------------|------------------------------|--------------------------------------|
| 1 | Distance of Mangroves from proposed plant boundary. | Meters | ~ 170 | > 650 |
| 2 | Forest land involved | ha | 102.39 | NIL |
| 3 | Sulfur emission as SO ₂ | TPA | ~ 5,386 | ~ 2,693 |
| 4 | Fluoride emission as F | TPA | ~ 50 | ~ 25 |
| 5 | Generation of waste | TPA | ~ 53,000 | 26,500 |
| 6 | Generation of effluent* | m ³ /day | ~ 4,400 | ~ 2,261 |
| 7 | Fresh water consumption | m ³ /day | ~ 29,700 | ~ 14,701 |
| 8 | Electricity Consumption | MW | ~ 300 | ~ 150 |
| 9 | Power generation from waste Heat Recovery | MW | ~ 40 | ~ 20 |
| 10 | Copper Slag generation | TPM | ~ 1,72,761 | ~ 86,380 |
| 11 | Phosphogypsum generation | TPM | ~ 2,08,334 | ~ 1,04,167 |

*Plant is designed based on "ZERO Liquid Discharge".

28.19.9 The Environment Management Plan for the 0.5 MTPA Copper Complex is similar to 1.0 MTPA Copper Complex submitted as a part of final submissions. There is no reduction in Corporate Environmental Responsibility (CER) budget for the amendment proposed.

| Sr. No. | Particulars | Unit | As per EC Granted (1.0 MTPA) | Proposed Amendment for EC (0.5 MTPA) |
|---------|---|-----------|------------------------------|--------------------------------------|
| 1 | Capital cost of the Project | INR Cr. | ~ 10,000 | ~ 6,250 |
| 2 | Capital cost for Environmental Protection Measures | INR Cr. | ~ 1,050.11 | ~ 625 |
| 3 | Estimated Environmental Protection Budget | INR Cr. | ~ 52.75 | ~ 27 |
| 4 | Corporate Environmental Responsibility (CER) | INR Cr. | 58.02 | 58.02 |
| 5 | Total Project Area | Ha. | 256.58 | 136.75 |
| 6 | Greenbelt Area | Ha. | ~ 89.8 | ~ 46.34 |
| 7 | Employment Generation during Construction phase (Direct & Indirect) | Nos./ Day | ~ 3000 | ~ 3000 |
| 8 | Employment Generation during Operation phase (Direct & Indirect) | Nos./ Day | ~ 5000 | ~ 2500 |
| 9 | Environmental Management Plan | - | As submitted in EIA report | No Change |

Observations of the Committee

28.19.10 The Committee noted the following:

- i. Amendment is sought to the EC granted on 8/05/2020, a green field copper refinery of 1 MTPA capacity to 0.5 MTPA, at Mundra in Gujarat. The project cost is reduced from 10000 Cr to 6250 Cr.
- ii. Gold and silver production is same as it was in case on 1 MTPA capacity of refinery. No explanation for the same is available.
- iii. Reason for change is current market situation and prevailing environment.
- iv. Layout of the refinery has been optimised to exclude mangroves and Dhaneswari River from the plot and to make it more spacious. The river shall be now flowing alongside of the plot. The changed layout is near a village now in downwind direction.
- v. River is now flowing along the plant. Details of HFL and flood plain have not been furnished.
- vi. Land requirement has been reduced from 256.58 ha to 136.75 ha within the notified APSEZ. Out of this land of 136.75 ha, 9.34 ha land is yet to be acquired and balance is under possession of SEZ. Agreement for transfer of the land has been signed between APSEZ and AEL.
- vii. There is a need to relook at the emission levels given in previous EC of May 2020. Following emission levels are high and may be changed to;
 - a. SO₂ in stacks- 600 mg/Nm³ to 100 mg/Nm³
 - b. SO₂ from H₂SO₄ plant- 1.0 kg/ton of acid to 0.7 Kg/t of acid
 - c. Acid mist- 50 mg/Nm³ to 30 mg/Nm³
 - d. Fluoride emissions -20 mg/Nm³ to 10 mg/Nm³
 - e. PM -150 mg/Nm³ to 30 mg/Nm³
- viii. There is a case pending in NGT challenging the EC by Kheti Vikas Sewa Trust in NGT Pune. Hearing for the case is due on 10th Feb 2021.
- ix. Addendum to EIA has not been furnished for these changes. Revised land use change details have not been made available.
- x. AAQ modelling needs to be carried out afresh as the location of chimneys have been changed.
- xi. Green belt has been reduced from 35% to 34 % which is not acceptable. In fact it should be increased beyond 35 % as a village is nearby in the downwind direction.
- xii. No construction activity/infringement will take place in flood plain of Dhaneswari river. The flood plain corresponding to HFL of Dhaneswari river shall be verified and depicted on map by an authority not below the rank of District Magistrate/Executive Engineer of the State Government.
- xiii. The PP will raise green belt in 35% of the plant area as prescribed earlier in the EC dated 8th May, 2020. This will include 50 m wide green belt along the boundary of the plant situated towards the Dhaneswari river side.

Recommendations of the Committee

28.19.11 In light of the observations mentioned at para no. 28.19.10 and after deliberations, the Committee recommended to return the proposal in present form.

28.20 Renaming of Environment Clearance accorded units' - Sponge Iron Plant (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD)-7,80,000 TPA along with 83 MW Captive Power Plant (WHRB-52 MW + AFBC-6 MW + CFBC-25 MW) as M/s Orissa Metaliks Private Limited (Unit-I) keeping rest of the unit Mini Blast furnace (1 x 320 m³)-3,90,000 TPA with 200 TPD oxygen plant as M/s Orissa Metaliks Private Limited by **M/s Orissa Metaliks Private Limited** at Village-Gokulpur, P.O-Shyamraipur, P.S-Kharagpur (L), **Dist. Paschim Medinipur, West Bengal**. [Online Proposal No. IA/WB/IND/188930/2020; File No. J-11011/229/2007-IA-II(I)] – **Amendment and part transfer of Environment Clearance** – regarding

28.20.1 **M/s. Orissa Metaliks Private Limited** has made an online application vide proposal no. IA/WB/IND/188930/2020 dated 19/12/2020 along with Form 4 and sought for amendment in the Environmental Clearance accorded by the Ministry vide letter no. J-11011/227/2008-I A.II(I) dated 12/06/2008, 10/12/2008, 06/01/2017, 30/08/2018 and 26/12/2019.

Details submitted by the project proponent

28.20.2 Chronology of details of EC granted to the project proponent:

| Sl. No. | Description (Environmental Clearance) | Date | | | | |
|---|--|---|---|---|---------------|--|
| 1 | Environmental Clearance accorded for Steel Plant (5,00,000 TPA MBF & SMS) at village-Gokulpur, P.O.-Shyamraipur, P.S.-Kharagpur (L), Dist. Paschim Medinipur, West Bengal at Shyamraipur, Gokulpur, Khargapur, District Paschim Medinipur, West Bengal in favour of M/s Rashmi Metaliks Pvt. Ltd. | Issued by MoEF&CC File No- J-11011 /227/2007-IA- II (I), dated 12/06/2008. | | | | |
| 2 | Change of location of Sponge Iron plant at Mouja-Mathurakismat, at Village Gokulpur, Kharagpur, District Paschim Medinipur, West Bengal. | Issued by MoEF&CC vide File No- J-11011 /365/2007-IA- II (I), dated 10/12/2008. | | | | |
| 3 | Transfer of Environmental Clearance: By virtue of order of Hon'ble Calcutta High Court for demerge, EC got transferred in favour of M/s Orissa Metaliks Private Limited . <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Units under the company Name Orissa Metaliks Private limited</td> </tr> <tr> <td>DRI (10 X100 TPD; 3 X350 TPD) WITH WHRB based CPP</td> </tr> <tr> <td>MINI BLAST FURNACE (1 x 320 m³)</td> </tr> <tr> <td>FBC BASED CPP</td> </tr> </table> | Units under the company Name Orissa Metaliks Private limited | DRI (10 X100 TPD; 3 X350 TPD) WITH WHRB based CPP | MINI BLAST FURNACE (1 x 320 m ³) | FBC BASED CPP | Issued by MoEF&CC vide F. No.J-11011/227/2007-IA II (I) on dated 06/01/2017. |
| Units under the company Name Orissa Metaliks Private limited | | | | | | |
| DRI (10 X100 TPD; 3 X350 TPD) WITH WHRB based CPP | | | | | | |
| MINI BLAST FURNACE (1 x 320 m ³) | | | | | | |
| FBC BASED CPP | | | | | | |
| 4 | Environmental Clearance- Change in configuration for Sponge Iron Plant to (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD) at Mouja- Mathurakismat & Amba, Village-Gokulpur, P.O-Shyamraipur, P.S-Kharagpur (L), Dist. Paschim Medinipur, West Bengal under clause 7(ii) of EIA Notification, 2006. | Issued by MoEF&CC vide F. No.J-11011/227/2007-IA II (I) on dated 30/08/2018. | | | | |
| 5 | Environmental Clearance- Expansion in Sponge Iron plant (6,00,000 TPA to 7,80,000 TPA) & Mini Blast Furnace with oxygen Plant (3,00,000 TPA to 3,90,000 | Issued by MoEF&CC vide F. No.J-11011/227/2007-IA II (I) | | | | |

| Sl. No. | Description (Environmental Clearance) | Date |
|---------|--|----------------------|
| | TPA) by process optimization and increasing no of working days/annum, at Village-Gokulpur, P.O.-Shyamraipur, District-Paschim Midnapore (W.B.) under clause 7(ii) of EIA Notification, 2006. | on dated 26/12/2019. |

28.20.3 The project proponent reported that monitoring authority of MoEF&CC (Ro_MoEFCC, Bhubaneswar) vide report dated 29/09/2020 raised issue to reorganize the EC's held by OMPL in the name of OMPL and OMPL-Unit I for ease of compliance and also for monitoring by concerned authorities. Hence for ease of compliance, to reorganize the product sale for which EC accorded and to facilitate the monitoring condition stipulated by Ministry time to time, it has been proposed to rename the project 'Sponge Iron Plant (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD)-7,80,000 TPA along with 83 MW Captive Power Plant (WHRB-52 MW + AFBC-6 MW + CFBC-25 MW)' as M/s Orissa Metaliks Private Limited (Unit-I)(hence referred as OMPL-I) keeping rest of the unit 'Mini Blast furnace (1 x 320 m³)-3,90,000 TPA with 200 TPD oxygen plant' as M/s Orissa Metaliks Private Limited (OMPL).

28.20.4 Following is the Configuration & capacity change granted in EC and the amendment desired in the EC:

| Name of the Units | As Per EC | | | | | Amendment Desired (Rename Unit Name) |
|--|---|--------------|-----------------------------|---|---------------------------------|--|
| | Configuration | Production | Product | Location Detail | Unit Name | |
| Sponge Iron Plant (DRI Kiln) | (6 x 100 + 1 x 350 + 1 x 600 + 1 x 500) | 7,80,000 TPA | Sponge Iron | Mouja-Mathurakismat (J.L. No.-114) & Amba (J.L. No.-115), Village-Gokulpur, P.O.-Shyamraipur, P.S-Kharagpur (L), Dist. Paschim Medinipur, West Bengal | Orissa Metaliks Private Limited | Orissa Metaliks Private Limited Unit-I |
| WHRB Based CPP | 52 MW | 52 MW | Power | | | |
| AFBC Based CPP | 6 MW | 6 MW | | | | |
| CFBC Based CPP | 25 MW | 25 MW | | | | |
| Mini Blast Furnace with 200 TPD Oxygen plant & PCM | 1 x 320 m ³ | 3,90,000 TPA | Hot Molten Liquid/ Pig Iron | Mouja-Khidirpur(J.L. No.-140) Village-Gokulpur, P.O.-Shyamraipur, P.S-Kharagpur | | Orissa Metaliks Private Limited |

| Name of the Units | As Per EC | | | | | Amendment Desired (Rename Unit Name) |
|-------------------|---------------|------------|---------|---|-----------|--------------------------------------|
| | Configuration | Production | Product | Location Detail | Unit Name | |
| | | | | (L), Dist. Paschim Medinipur, West Bengal | | |

28.20.5 The project proponent has submitted that there is no change in configuration and production capacity from EC sanction capacity. The proposal is to rename the project ‘Sponge Iron Plant (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD)-7,80,000 TPA along with 83 MW Captive Power Plant (WHRB-52 MW + AFBC-6 MW + CFBC-25 MW)’ as M/s Orissa Metaliks Private Limited (Unit-I) (hence referred as OMPL-I) keeping rest of the unit ‘Mini Blast furnace (1 x 320 m³)-3,90,000 TPA with 200 TPD oxygen plant’ as M/s Orissa Metaliks Private Limited.

28.20.6 The Status of Implementation of the earlier EC facilities is as follows:

| Name of the Units | Permission as Per EC | Size of Units under operation | Production Capacity as per Valid CFO | Name of Product |
|--|---|---|--------------------------------------|------------------------|
| Sponge Iron Plant (DRI Kiln) | (6 x 100 + 1 x 350 + 1 x 600 + 1 x 500) TPD | (6 x 100 + 1 x 350 + 1 x 600 + 1 x 500) TPD | 7,80,000 TPA | Sponge Iron |
| WHRB Based CPP | 52 MW | (6 X 10 + 1 X39 TPH+2 X60) TPH | 52 MW | Power |
| AFBC Based CPP | 6 MW | 6 MW | 6 MW | Power |
| CFBC Based CPP | 25 MW | 25 MW | 25 MW | Power |
| Mini Blast Furnace with 200 TPD Oxygen plant & PCM | 1 x 320 m ³ (3,90,000 TPA) | 1 x 320 m ³ | 3,90,000 TPA | Pig Iron/ Molten Metal |

28.20.7 In this regard, following documents have been submitted by the project proponent:

- vi. Original affidavit “NOC” from M/s Orissa Metaliks Private Limited {Stating for renaming the project Sponge Iron Plant along with Captive Power as M/s Orissa Metaliks Private Limited (Unit-I)}.
- vii. Original affidavit “Undertaking” from M/s Orissa Metaliks Private Limited (Unit-I) stating that all the terms and conditions stipulated in Environment Clearance issued vide File No- J-11011 /227 /2007-IA- II (I), dated 12/06/2008, 10/12/2008, 06/01/2017, 30/08/2018 and 26/12/2019 for the unit Sponge Iron Plant along with Captive Power Plant will be complied by OMPL-I.
- viii. Board Resolution by OMPL.
- ix. Revised Environment management plan by OMPL and OMPL-I
- x. Revised Plant Layout with area and green belt detail by OMPL and OMPL-I.

- xi. EC condition compliance Responsibility Matrix between M/s Orissa Metaliks Private Limited and M/s Orissa Metaliks Private Limited Unit-I.

Proceedings of the EAC meeting held on 30-31st December, 2020

28.20.8 The proposal cited above was considered by the EAC (Industry 1) in its 27th meeting held on 30-31st December, 2020 wherein the Committee formed a sub-committee comprising of the following to examine the documents submitted by the project proponent and furnish a report to the EAC prior to the next EAC meeting for taking appropriate view in the matter.

- i. Shri. R.P.Sharma, EAC Member,
ii. Shri. J.S. Kamyotra, EAC Member,

For the above purpose, Shri. Sundar Ramanathan, Scientist 'E', MoEF&CC would be co-opted as a member of the above subcommittee.

28.20.9 The sub-committee has examined the following documents:

- i. EC condition compliance Responsibility Matrix between M/s Orissa Metaliks Private Limited and M/s Orissa Metaliks Private Limited Unit-I.

Environment Clearance Condition Compliance Response Matrix

| Sl. No | Item | Existing EC in favour of M/s Orissa Metaliks Pvt. Ltd. | Facilities/utilities after rename of EC accorded units to M/s Orissa Metaliks Pvt. Ltd (Unit I) and M/s Orissa Metaliks Pvt. Ltd. | |
|----------|-----------------------------|---|---|---|
| | | | M/s Orissa Metaliks Pvt. Ltd. (Unit I) | M/s Orissa Metaliks Pvt. Ltd. |
| A | Title of the project | Sponge iron plant (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD)-7,80,000 TPA along with 83 MW Captive power plant (WHRB-52 MW + AFBC-6 MW + CFBC-25 MW) and Mini Blast Furnace (1 x 320 m ³)- 3,90,000 TPA with 200 TPD oxygen plant at Village Gokulpur, P.O. Shyamraipur, P.S. Kharagpur (Local) District West Medinipur, West Bengal. | Sponge iron plant 780, 000 TPA (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD)-7,80,000 TPA along with 83 MW Captive power plant 83 MW (WHRB-52 MW + AFBC-6 MW + CFBC-25 MW) at Village Gokulpur, P.O. Shyamraipur, P.S. Kharagpur (Local) District West Medinipur, West Bengal. | Mini Blast Furnace (1 x 320 m ³)-3,90,000 TPA with 200 TPD oxygen plant at Village Gokulpur, P.O. Shyamraipur, P.S. Kharagpur (Local) District West Medinipur, West Bengal. |
| B | Location | Village Gokulpur, P.O. Shyamraipur, P.S. Kharagpur (Local) District West Medinipur, West Bengal | Mouja-Mathurakismat (J.L. No-114) & Amba (J.L. No-115), Village Gokulpur, P.O. Shyamraipur, P.S. Kharagpur (Local) District West Medinipur, West Bengal. Coordinates: | Mouja-Khidipur (J.L. No-140), Village Gokulpur, P.O. Shyamraipur, P.S. Kharagpur (Local) District West Medinipur, West Bengal. Coordinates: |
| | | | Latitudes (North) | Longitudes (East) |
| | | | 22°22'50.90" | 87°16'50.70" |
| | | | 22°22'45.95" | 87°16'58.58" |
| | | | 22°22'38.12" | 87°16'58.23" |
| | | | 22°22'30.74" | 87°16'57.52" |
| | | | 22°22'31.07" | 87°16'47.87" |
| | | | Latitudes (North) | Longitudes (East) |
| | | | 22°21'35.01" | 87°17'26.99" |
| | | | 22°21'31.63" | 87°17'28.11" |
| | | | 22°21'38.77" | 87°17'34.12" |
| | | | 22°21'30.89" | 87°17'37.91" |
| | | | 22°21'31.87" | 87°17'32.80" |

| Sl. No | Item | Existing EC in favour of M/s Orissa Metaliks Pvt. Ltd. | | Facilities/utilities after rename of EC accorded units to M/s Orissa Metaliks Pvt. Ltd (Unit I) and M/s Orissa Metaliks Pvt. Ltd. | | | | | | |
|-----------------------------------|----------------------------------|--|------------------------|---|-------------------------------|---|--------------------------|---------------|------------------------|--------------------------|
| | | | | M/s Orissa Metaliks Pvt. Ltd. (Unit I) | M/s Orissa Metaliks Pvt. Ltd. | | | | | |
| C | Facilities | | | | | | | | | |
| 1. | Sponge Iron Plant (DRI Kiln) | 780, 000 TPA (6 x100 + 1 x 350 + 1 x 500 + 1 x 600) TPD | | 780, 000 TPA (6 x100 + 1 x 350 + 1 x 500 + 1 x 600) TPD | | | | | | |
| 2. | CPP-WHRB Based | 52 MW (6 X 10 + 1 X 39 + 2 X 60) TPH | | 52 MW (6 X 10 + 1 X 39 + 2 X 60) TPH | | | | | | |
| 3. | CPP-FBC Based | 31 MW (1 X 32 + 1 X100) TPH) | | 31 MW (1 X 32 + 1 X 100) TPH) | | | | | | |
| 4 | Mini Blast Furnace with PCM | 390, 000 TPA (1 X 320 m ³) | | **** | 1 X 320 m ³ | | | | | |
| 5 | Oxygen Plant | 200 TPD | | **** | 200 TPD | | | | | |
| D | Products | | | | | | | | | |
| 1. | Sponge Iron | 7,80,000 TPA | | 7,80,000 TPA | | | | | | |
| 2. | Hot Molten Metal/ Pig Iron | 3,90,000 TPA | | **** | 3,90,000 TPA | | | | | |
| 3. | Power | 83 MW | | 83 MW | | | | | | |
| 4. | Oxygen | 200 TPD | | **** | 200 TPD | | | | | |
| Other facilities/Utilities | | | | | | | | | | |
| E | Raw Materials Requirement | S. No. | Raw Materials | Quantity (in TPA) | S. No. | Raw Materials | Quantity (in TPA) | S. No. | Raw Materials | Quantity (in TPA) |
| | | 1 | Iron Ore Lumps / Fines | 2,80,400 | 1 | Iron Ore Lumps / Fines | 2,34,000 | 1 | Iron Ore Lumps / Fines | 46,400 |
| | | 2 | I/o Pellet | 15,60,832 | 2 | I/o Pellet | 11,10,032 | 2 | I/o Pellet | 4,50,800 |
| | | 3 | Sinter | 87,200 | 3 | Coal and Coal Dust | 7,72,000 | 3 | Sinter | 87,200 |
| | | 4 | Coal and Coal Dust | 8,74,800 | 4 | Dolomite | 54,600 | 4 | Coal and Coal Dust | 1,02,800 |
| | | 5 | Coke & Coke fines | 53,200 | 5 | Limestone | 7,200 | 5 | Coke & Coke fines | 53,200 |
| | | 6 | Dolomite | 54,600 | | | | 6 | Quartzite | 1,59,900 |
| | | 7 | Limestone | 7,200 | | | | 7 | Pyroxenite | 11,700 |
| | | 8 | Quartzite | 1,59,900 | | | | | | |
| | | 9 | Pyroxenite | 11,700 | | | | | | |
| F | Land | 42 Acres | | 40 Acres | | 2 Acres | | | | |
| G | Project Cost | 450.0 Crores (excluding WHRB) | | 439 Crores (Including WHRB) | | 111 Crores | | | | |
| H | Water Requirement | 2,658 KLD Source: Existing Bore well / Rainwater Harvesting Pond, Surface water | | 2050 KLD Source: Existing Bore well & Rainwater Harvesting Pond-1640 KLD Surface water- 410 KLD | | 608 KLD Source: Existing Bore well / Rainwater Harvesting Pond & surface water | | | | |

| Sl. No | Item | Existing EC in favour of M/s Orissa Metaliks Pvt. Ltd. | | Facilities/utilities after rename of EC accorded units to M/s Orissa Metaliks Pvt. Ltd (Unit I) and M/s Orissa Metaliks Pvt. Ltd. | | | | | |
|----------|---|--|---|---|-------------------|---|---|-------------------|--|
| | | | | M/s Orissa Metaliks Pvt. Ltd. (Unit I) | | | M/s Orissa Metaliks Pvt. Ltd. | | |
| I | Manpower | 560 persons | | 460 persons | | | 100 persons | | |
| J | Air Pollution Control Device details | DRI | ESP | DRI | ESP with WHRB | MBF with PCM | Bag Filter, Cyclone | | |
| | | FBC based CPP | ESP | FBC based CPP | ESP | | | | |
| | | MBF with PCM | Bag Filter, Cyclone | | | | | | |
| K | Solid Waste | Qty. (TPA) | Management | Solid waste | Qty. (TPA) | Manag. | Solid waste | Qty. (TPA) | Manag. |
| | Kiln Accretion | 6,240 | Used in Sinter Plant, Cement Manufacturing | Kiln Accretion | 6,240 | Used in Sinter Plant, Cement Manufacturing | MBF Slag | 1,48,200 | Used in Cement Manufacturing |
| | Dolochar | 1,48,200 | Used in FBC Boiler | Dolochar | 1,48,200 | Used in FBC Boiler | MBF Dust & Sludge | 1,70,000 | Used in Sinter Plant and also for brick manufacturing. |
| | Fly Ash | 84,500 | Used for bricks manufacturing and Cement Manufacturing | Fly Ash | 84,500 | Used for bricks manufacturing and Cement Manufacturing | | | |
| | Dust from APC Devices | 1,09,200 | Used in Sinter Plant, land filling and also for Brick Manufacturing | Dust from APC Devices | 1,09,200 | Used in Sinter Plant, land filling and also for Brick Manufacturing | | | |
| | Bottom Ash | 1,52,503 | Road Construction & Land Filling | Bottom Ash | 1,52,503 | Road Construction & Land Filling | | | |
| | MBF Slag | 1,48,200 | Used in Cement Manufacturing | | | | | | |
| | MBF Dust & Sludge | 1,70,000 | Used in Sinter Plant and also for brick manufacturing. | | | | | | |
| L | Power Requirement | 45 MW Source: Captive Power Plant/ WBSEDCL D.G. Set: 04 | | 35 MW Source: Captive Power Plant D.G. Set: 2 x 600 KVA + 1 x 350 KVA | | | 10 MW Source: Power Plant of OMPL/ WBSEDCL D.G. Set: 1 x 600 KVA | | |

POINT WISE RESPONSIBILITY TO EC CONDITION

| Sl. No. | Environment Clearance Condition | M/s Orissa Metaliks Private Limited (Unit I) | M/s Orissa Metaliks Private Limited |
|----------|---------------------------------|--|-------------------------------------|
| M | Specific Conditions | | |

| Sl. No. | Environment Clearance Condition | M/s Orissa Metaliks Private Limited (Unit I) | M/s Orissa Metaliks Private Limited |
|---------|---|---|---|
| 1. | Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line stack monitoring facilities for all the stacks should be provided and sufficient air pollution control devices shall be provided and sufficient air pollution control devices shall be provided to keep the emission levels below prevailing standards. Data on ambient air quality and stack emissions should be regularly submitted to this Ministry including its Regional Office at Bhubaneswar, CPCB and W.B Pollution Control Board (WBPCB) once in six months. | Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line stack monitoring facilities for all the stacks should be provided and sufficient air pollution control devices shall be provided and sufficient air pollution control devices shall be provided to keep the emission levels below prevailing standards. Data on ambient air quality and stack emissions should be regularly submitted to this Ministry including its Regional Office at Bhubaneswar, CPCB and W.B Pollution Control Board (WBPCB) once in six months. | Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line stack monitoring facilities for all the stacks should be provided and sufficient air pollution control devices shall be provided and sufficient air pollution control devices shall be provided to keep the emission levels below prevailing standards. Data on ambient air quality and stack emissions should be regularly submitted to this Ministry including its Regional Office at Bhubaneswar, CPCB and W.B Pollution Control Board (WBPCB) once in six months. |
| 2. | As proposed, electrostatic precipitator (ESP) shall be provided to DRI kilns to control emissions within prevailing standards. The waste gases from the DRI kiln shall be passed through dust Settling Chamber (DSC) to settle the dust particles and after Burning Chamber (ABC). The hot gases from ABC shall be taken to gas cleaning plant to burn the combustibles and cleaned in ESP. | As proposed, electrostatic precipitator (ESP) shall be provided to DRI kilns to control emissions within prevailing standards. The waste gases from the DRI kiln shall be passed through dust Settling Chamber (DSC) to settle the dust particles and after Burning Chamber (ABC). The hot gases from ABC shall be taken to gas cleaning plant to burn the combustibles and cleaned in ESP. | (Not Applicable) |
| 3. | Dust extraction system comprising of dry fog system including pulse jet bag filters shall be provided to the blast furnace stock house. Dust extraction system shall also be provided to blast furnace Gas cleaning system and fume extraction system shall be provided to the electric arc furnace (EAF). Bag filters shall be provided at the transfer points to control fugitive emissions. Dust suppression system shall be provided to control dust from raw material handling and storage area. The water shall be sprayed in the After Burning Chamber (ABC). | Bag filters shall be provided at the transfer points to control fugitive emissions. Dust suppression system shall be provided to control dust from raw material handling and storage area in DRI Plant. The water shall be sprayed in the After Burning Chamber (ABC). | Dust extraction system comprising of dry fog system including pulse jet bag filters shall be provided to the blast furnace stock house. Dust extraction system shall also be provided to blast furnace Gas cleaning system and fume extraction system shall be provided to the electric arc furnace (EAF). Bag filters shall be provided at the transfer points to control fugitive emissions. Dust suppression system shall be provided to control dust from raw material handling and storage area. |
| 4. | Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored Guidelines/Code of Practice issued by the CPCB shall be followed. | Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored Guidelines/Code of Practice issued by the CPCB shall be followed. | Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored Guidelines/Code of Practice issued by the CPCB shall be followed. |
| 5. | Total water requirement from Public Health Engineering Department shall not exceed 8,160 m ³ /day. Effluent treatment plant (ETP) shall be installed and all the treated wastewater including blow down water from Blast furnace, Sinter plant, Oxygen plant, SMS, Caster etc. Shall be recycled and reused in the process dust suppression and green belt development 'Zero' effluent discharge should | 2050 KLD water is required for 780, 000 TPA Sponge iron plant (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD)-7,80,000 TPA along with 83 MW Captive power plant (WHRB-52 MW + AFBC-6 MW + CFBC-25 MW) and it is/ will be sourced from Bore well , Rainwater Harvesting Pond and surface water (Kansabati river). | 608 KLD water is required for MBF with oxygen plant and it is/ will be sourced from Bore well, Rainwater Harvesting Pond and waste water. Zero' effluent discharge shall be strictly followed and no wastewater discharged outside the premises |

| Sl. No. | Environment Clearance Condition | M/s Orissa Metaliks Private Limited (Unit I) | M/s Orissa Metaliks Private Limited |
|------------|--|--|--|
| | be strictly followed and no wastewater should be discharged outside the premises. | Zero' effluent discharge shall be strictly followed and no wastewater discharged outside the premises. | |
| 6. | Prior 'Permission' for the withdrawal of 8,160 m ³ /day water from the concerned department shall be obtained. | 2050 KLD water is required and it is/ will be sourced from Bore well, Rainwater Harvesting Pond and surface water (Kansabati river). | 608 KLD water is required and it is/ will be sourced from Bore well, Rainwater Harvesting Pond and waste water. |
| 7. | All the char from DRI plant shall be utilized in AFBC boiler of power plant and no char shall be disposed off anywhere else. All the blast furnace (BF) slag shall be granulated and provided to cement manufactures for further utilization SMS slag shall also be properly utilized. All the other solid waste including broken refractory mass shall be properly disposed off in environment friendly manner. | All the char from DRI plant shall be utilized in AFBC boiler of power plant and no char shall be disposed off anywhere else. All the other solid waste including broken refractory mass shall be properly disposed off in environment friendly manner. | All the blast furnace (BF) slag shall be granulated and provided to cement manufactures for further utilization. SMS slag shall also be properly utilized. All other solid waste including broken refractory mass shall be properly disposed off in environment friendly manner. |
| 8. | Coal and coke fines shall be recycled and reused in the process. Iron ore, fluxes, mill scale etc. shall be recycled to sinter plant to produce sinter. Waste oil shall be sold to authorized recyclers/reprocesses. | Coal and coke fines shall be recycled and reused in the process. Iron ore, fluxes, mill scale etc. shall be recycled to sinter plant to produce sinter. Waste oil shall be sold to authorized recyclers/reprocesses. | Coal and coke based fines shall be recycled and reused in the process. Waste oil shall be sold to authorized recyclers/reprocesses. |
| 9. | A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal. | A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal. | A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal. |
| 10. | All the fly ash be utilized as per Fly Ash Notification, 1999 as amended in 2003. | All the fly ash be utilized as per Fly Ash Notification, 1999 as amended in 2003. | (Not Applicable) |
| 11. | As proposed green belt shall be developed in 33% area within and around the plan premises as per the CPCB guidelines in consultation with DFO. | As proposed green belt shall be developed in 33% area within and around the plan premises as per the CPCB guidelines in consultation with DFO. | As proposed green belt shall be developed in 33% area within and around the plan premises as per the CPCB guidelines in consultation with DFO. |
| 12. | All the recommendations made in the charter on corporate Responsibility to Environment Protection (CREP) for the Steel plants shall be implemented. | All the recommendations made in the charter on corporate Responsibility to Environment Protection (CREP) for the Steel plants shall be implemented. | All the recommendations made in the charter on corporate Responsibility to Environment Protection (CREP) for the Steel plants shall be implemented. |
| 13. | DRI kiln should be provided with waste heat recovery boiler (WHRB) to make use of flue gases generated during the process. | DRI kiln should be provided with waste heat recovery boiler (WHRB) to make use of flue gases generated during the process. | (Not Applicable) |
| 14. | All the char from DRI plant should be utilized in AFBC boiler of power plant and no char should be disposed anywhere else. | All the char from DRI plant should be utilized in AFBC boiler of power plant and no char should be disposed anywhere else. | (Not Applicable) |
| 15. | All the slag generated from the blast furnace should be granulated and used in cement plants. | (Not Applicable) | All the slag generated from the blast furnace should be granulated and used in cement plants. |
| No. | General Conditions | | |
| 1. | The project authorities must strictly adhere to the stipulation made by the West Bengal State Pollution Control Board and the State | The project authorities must strictly adhere to the stipulation made by the West Bengal State Pollution Control | The project authorities must strictly adhere to the stipulation made by the West Bengal State Pollution Control |

| Sl. No. | Environment Clearance Condition | M/s Orissa Metaliks Private Limited (Unit I) | M/s Orissa Metaliks Private Limited |
|---------|---|---|---|
| | Government. | Board and the State Government. | Board and the State Government. |
| 2. | No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC). | No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC). | No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC). |
| 3. | The Gaseous emissions from various process units shall conform to the load/mass-based standards notified by this Ministry on 19th May, 1993 and other standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. | The Gaseous emissions from various process units shall conform to the load/mass-based standards notified by this Ministry on 19th May, 1993 and other standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. | The Gaseous emissions from various process units shall conform to the load/mass-based standards notified by this Ministry on 19th May, 1993 and other standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. |
| 4. | At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM ₁₀ , SO ₂ , and NO _x are anticipated in consultation with the SPCB Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the SPCB/CPCB once in six months. | At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM ₁₀ , SO ₂ , and NO _x are anticipated in consultation with the SPCB Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the SPCB/CPCB once in six months. | At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM ₁₀ , SO ₂ , and NO _x are anticipated in consultation with the SPCB Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the SPCB/CPCB once in six months. |
| 5. | Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose. | Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose. | Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose. |
| 6. | The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time) | The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time) | The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time) |
| 7. | Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. | Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. | Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. |
| 8. | The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table. | The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table. | The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground |

| Sl. No. | Environment Clearance Condition | M/s Orissa Metaliks Private Limited (Unit I) | M/s Orissa Metaliks Private Limited |
|---------|---|---|---|
| 9. | The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc. | The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc. | water table. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc. |
| 10. | Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEF&CC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Orissa. The funds so provided shall not be diverted for any other purpose. | Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEF&CC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Orissa. The funds so provided shall not be diverted for any other purpose. | Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEF&CC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Orissa. The funds so provided shall not be diverted for any other purpose. |
| 11. | A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom, suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent. | A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom, suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent. | A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom, suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent. |
| 12. | The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, 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 MOEFCC at Orissa, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectorial parameters, indicated for the projects shall be continuously monitored and displayed at a convenient location near the main gate of the company in the public domain. | The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, 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 MOEFCC at Orissa, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectorial parameters, indicated for the projects shall be continuously monitored and displayed at a convenient location near the main gate of the company in the public domain. | The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, 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 MOEFCC at Orissa, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectorial parameters, indicated for the projects shall be continuously monitored and displayed at a convenient location near the main gate of the company in the public domain. |

| Sl. No. | Environment Clearance Condition | M/s Orissa Metaliks Private Limited (Unit I) | M/s Orissa Metaliks Private Limited |
|---------|--|--|--|
| 13. | The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Orissa/CPCB/SPCB shall monitor the stipulated conditions. | The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Orissa/CPCB/SPCB shall monitor the stipulated conditions. | The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Orissa/CPCB/SPCB shall monitor the stipulated conditions. |
| 14 | The environmental statement for each financial year ending 31th March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MOEFCC at Orissa by e-mail. | The environmental statement for each financial year ending 31th March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MOEFCC at Orissa by e-mail. | (The environmental statement for each financial year ending 31th March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MOEFCC at Orissa by e-mail. |
| 15 | 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 newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Orissa. | 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 newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Orissa. | 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 newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Orissa. |
| 16 | Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work. | Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work. | Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work. |
| 17 | The Ministry may revoke or suspend the clearance, if implementation of any of the above condition is not satisfactory. | The Ministry may revoke or suspend the clearance, if implementation of any of the above condition is not satisfactory. | The Ministry may revoke or suspend the clearance, if implementation of any of the above condition is not |

| Sl. No. | Environment Clearance Condition | M/s Orissa Metaliks Private Limited (Unit I) | M/s Orissa Metaliks Private Limited |
|---|---|---|---|
| | | | satisfactory. |
| 18 | The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner shall implement these conditions. | The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner shall implement these conditions. | The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner shall implement these conditions. |
| 19 | Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997. | Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997. | Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997. |
| 20 | The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and Rules. | The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and Rules. | The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and Rules. |
| Specific Conditions w.r.t to EC amendment dated 10.12.2008 | | | |
| 21 | Setting of Sponge Iron plant (10 x 100 TPD) at Mouza Mathurakismat, J.L. No-114 which is 1.5 KM from the site proposed earlier. | Setting of 780, 000 TPA Sponge iron plant (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD)-7,80,000 TPA along with 83 MW Captive power plant (WHRB-52 MW + AFBC-6 MW + CFBC-25 MW) at Mouza Mathurakismat, J.L. No-114 | (Not Applicable) |
| 22 | Adequate Air Pollution Control measures as noted in Environment management plan need be complied. | Adequate Air Pollution Control measures as noted in Environment management plan need be complied. | Adequate Air Pollution Control measures as noted in Environment management plan need be complied. |
| Specific Conditions w.r.t to EC letter dated 26/12/2019 | | | |
| 23 | Surface water shall be taken from Kansai River. No ground water shall be abstracted after completion of Kansai river pipeline. | Surface water shall be taken from Kansai River. No ground water shall be abstracted after completion of Kansai river pipeline. | Surface water shall be taken from Kansai River. No ground water shall be abstracted after completion of Kansai river pipeline. |
| 24 | Emission level from Bag filter and ESP shall be 30 mg/Nm ³ . | Emission level from Bag filter and ESP shall be less than 30 mg/Nm ³ . | Emission level from Bag filter and ESP shall be less than 30 mg/Nm ³ . |
| 25 | PP committed for use of imported coal only. However, the committee felt that during the non-availability of imported coal, PP shall be using Indian coal. Therefore the pollution control equipment shall be designed for use of Indian coal/higher pollution load. | PP committed for use of imported coal only. However, the committee felt that during the non-availability of imported coal, PP shall be using Indian coal. Therefore the pollution control equipment shall be designed for use of Indian coal/higher pollution load. | (Not Applicable) |
| 26 | Zero liquid discharge shall be adopted | Zero liquid discharge shall be adopted | Zero liquid discharge shall be adopted |
| 27 | 100% waste utilization shall be followed. | 100% waste utilization shall be followed. | 100% waste utilization shall be followed. |
| 28 | Green belt shall cover 33% of the total area in the plant site. | Green belt shall cover 33% of the total area in the plant site. The existing Green Belt if already | Green belt shall cover 33% of the total area in the plant site. The existing Green Belt if already |

| Sl. No. | Environment Clearance Condition | M/s Orissa Metaliks Private Limited (Unit I) | M/s Orissa Metaliks Private Limited |
|---------|---------------------------------|--|--|
| | | covering more than 33 % of the total plant area shall be retained. | covering more than 33 % of the total plant area shall be retained. |

- ii. “NOC” from M/s Orissa Metaliks Private Limited {Stating for renaming the project Sponge Iron Plant along with Captive Power as M/s Orissa Metaliks Private Limited (Unit-I)}.
- iii. “Undertaking” from M/s Orissa Metaliks Private Limited (Unit-I) stating that all the terms and conditions stipulated in Environment Clearance issued vide File No- J-11011 /227 /2007-IA- II (I), dated 12/06/2008, 10/12/2008, 06/01/2017, 30/08/2018 and 26/12/2019 for the unit Sponge Iron Plant along with Captive Power Plant will be complied by OMPL-I.
- iv. Board Resolution by OMPL.
- v. Revised Environment management plan by OMPL and OMPL-I
- vi. Revised Plant Layout with area and green belt detail by OMPL and OMPL-I.

28.20.10 After examination of the records, the Sub-committee submitted a report to the EAC stating that EC condition compliance Responsibility Matrix cited above at para no. 28.20.11 is found to be in order and recommended the following:

- i. Amendment in the Environmental Clearance accorded by the Ministry vide letter no. J-11011/227/2008-I A.II(I) dated 12/06/2008, 10/12/2008, 06/01/2017, 30/08/2018 and 26/12/2019 by excluding the “Sponge Iron Plant (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD)-7,80,000 TPA along with 83 MW Captive Power Plant (WHRB-52 MW + AFBC-6 MW + CFBC-25 MW)” and also modifying the specific as well as general conditions as per the compliance matrix given above.
- ii. Part transfer of “Sponge Iron Plant (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD)-7,80,000 TPA along with 83 MW Captive Power Plant (WHRB-52 MW + AFBC-6 MW + CFBC-25 MW)” facilities in the name of the M/s. Orissa Metaliks Private Limited (Unit I) by issuing an part transfer EC letter along with prescribing of specific as well as general conditions as per the compliance matrix given above.

28.20.11 The report of the sub-committee was placed before the EAC and the findings of the sub-committee was deliberated upon. After deliberations, the Committee accepted the sub-committee report and recommended the following:

- i. Amendment in the Environmental Clearance accorded by the Ministry vide letter no. J-11011/227/2008-I A.II(I) dated 12/06/2008, 10/12/2008, 06/01/2017, 30/08/2018 and 26/12/2019 by excluding the “Sponge Iron Plant (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD)-7,80,000 TPA along with 83 MW Captive Power Plant (WHRB-52 MW + AFBC-6 MW + CFBC-25 MW)” and also modifying the specific as well as general conditions as per the compliance matrix given above.

- ii. Part transfer of “Sponge Iron Plant (6 x 100 + 1 x 350 + 1 x 500 + 1 x 600 TPD)- 7,80,000 TPA along with 83 MW Captive Power Plant (WHRB-52 MW + AFBC-6 MW + CFBC-25 MW)” facilities in the name of the M/s. Orissa Metaliks Private Limited (Unit I) by issuing an part transfer EC letter along with prescribing of specific as well as general conditions as per the compliance matrix given above.

28.21 Modification in Existing Plant by Installing Auxiliary Facilities without Increasing Plant Capacity by **M/s. ArcelorMittal Nippon Steel India Limited** (Formerly Essar Steel India Limited) located at 27th km, Notified Hazira Industrial Area, Surat Hazira Road, **Surat, Gujarat** [Online Proposal No. IA/GJ/IND/189821/2020, File No. J-11011/44/2004-IA.II(I)] – **Prescribing of Terms of Reference – regarding.**

28.21.1 **M/s. ArcelorMittal Nippon Steel India Limited** has made an application online vide Proposal no. IA/GJ/IND/189821/2020 dated 24/12/2020 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006.

Details submitted by the project proponent

28.21.2 The project of M/s. ArcelorMittal Nippon Steel India Limited located in Village: Hazira, Tehsil: Choryasi, District: Surat, State: Gujarat is for Modification in Existing Plant by Installing Auxiliary Facilities without Increasing Plant Capacity.

28.21.3 Environmental site settings

| S. No. | Particulars | Details | Remarks |
|--------|---|--|----------------------|
| i. | Total land | 770.00 ha [Private] | Land use: Industrial |
| ii. | Existence of habitation & involvement of R&R, if any. | Hazira (Around 0.50 Km in South Direction) | - |
| iii. | Latitude and Longitude of the project site | Latitude: 21° 6'50.68"N Longitude: 72°38'33.69"E | - |
| iv. | Elevation of project site the | 9 meter | - |
| v. | Involvement of Forest land if any. | Nil | - |
| vi. | Water body exists within the project site as well as study area | Tapi ~0.5 km North East Direction Gulf of Khambhat 3 Km in west direction | - |
| vii. | Existence of ESZ/ ESA/national park/wildlife sanctuary/ biosphere | Dumas Reserved forest ~5.30 Km in South East direction. | - |

| | | | |
|--|--|--|--|
| | reserve/tiger reserve/elephant reserve etc. if any within the study area | | |
|--|--|--|--|

28.21.4 The existing project was accorded environmental clearance vide lr.no. F.No. J-11011/381/2014-IA II (I) dated 9th March 2016.

28.21.5 Implementation status of the existing EC

| Sr. No. | Name of Facility | Unit | As per EC dated 9 th March 2016 | | | Implementation Status as on Dec, 2020 | | |
|---------|------------------------------|---------------------|--|----------|----------|---------------------------------------|----------------------------------|--------------------------|
| | | | Existing | Proposed | Total | Status of Existing Units in 2016 | Status of Existing Units in 2020 | |
| 1. | HBI Plant (DRI Mod. I to VI) | MTPA | 7.83 | -4.0 | 3.83 | Only Mod V & VI are in operation | Mod I to VI “7.83” in operation | |
| 2. | Blast Furnace | MTPA | 2.04 | 3 | 5.04 | In operations | “2.04” in operations | |
| 3. | Sinter Plant | MTPA | 1.48 | 7 | 8.48 | In operations | “1.48” in operations | |
| 4. | Coke Oven (Recovery Type) | | | | | | | |
| | Gross Coke | MTPA | 1.2 | 1.35 | 2.55 | Under construction | Under construction | |
| | Crude Tar (By – Product) | TPA | 52,200 | 63,000 | 1,15,200 | | | |
| | Sulphur (By – Product) | TPA | 1,700 | 1,980 | 3,680 | | | |
| | Crude Benzol (By-Product) | TPA | 0 | 18,243 | 18,243 | | | |
| | Naphthalene | TPA | 130 | 0 | 130 | | | |
| 5 | Air Separation | | | | | | | |
| | Oxygen Gaseous | Nm ³ /hr | 3,60,544 | 64,200 | 4,24,744 | In operations | “3,60,544” in operations | |
| | Oxygen Liquid | | 2,950 | 500 | 3,450 | | | “2950” in operations |
| | Nitrogen | | 1,19,944 | 25,700 | 1,45,644 | | | “1,19,944” in operations |

| Sr. No. | Name of Facility | Unit | As per EC dated 9 th March 2016 | | | Implementation Status as on Dec, 2020 | |
|---------|--|------|--|----------|-------|---------------------------------------|----------------------------------|
| | | | Existing | Proposed | Total | Status of Existing Units in 2016 | Status of Existing Units in 2020 |
| | Argon | | 3,470 | 1,500 | 4,970 | | “3,470” in operations |
| 6 | Steel Melt Shop-1(EAF) (4Nos.) | MTPA | 4.6 | -4.6 | 0 | In operations (partial) | “4.6” in operations |
| 7 | Basic Oxygen Furnace(BoF) (3Nos.) | MTPA | 0 | 4.6 | 4.6 | proposed | proposed |
| 8 | Steel Melt Shop-2 (4 EAF& 4LF) | MTPA | 5.0 | 0 | 5.0 | In operations | “5.0” in operations |
| 9 | Corex Plant(2 Nos.) | MTPA | 1.7 | 0 | 1.7 | In operations | “1.7” in operations |
| 10 | Lime Plant (Lime/ Dolime) | MTPA | 0.93 | 0.27 | 1.2 | In operations | “0.93” in operations |
| 11 | CPP | MW | 31 | 0 | 31 | In operations (partial) | In operations |
| | | MW | 48 | 0 | 48 | Not yet established | Not yet established |
| | | MW | 525 | 0 | 525 | Not in operation | In operations |
| 12 | Plate Mill | MTPA | 1.5 | 0 | 1.5 | In operations | In operations |
| 13 | Pellet Plant | MTPA | 4.0 | 0 | 4.0 | Not yet established | Not yet established |
| 14 | CSP, Hot Rolling Mill & Long Product - HRC | MTPA | 3.5 | 0 | 3.5 | In operations | In operations |
| | Rebar | | 1.6 | 0 | 1.6 | Not yet established | Not yet established |
| | Wire Rod | | 0.7 | 0 | 0.7 | | |
| 15 | Caster Shop | | | | | | |
| | Slab From | MTPA | 4.9 | 0 | 4.9 | In | In |

| Sr. No. | Name of Facility | Unit | As per EC dated 9 th March 2016 | | | Implementation Status as on Dec, 2020 | |
|---------|---------------------------------------|------|--|----------|-------|---------------------------------------|---|
| | | | Existing | Proposed | Total | Status of Existing Units in 2016 | Status of Existing Units in 2020 |
| | Slab Caster | | | | | operations | operations |
| | Billets From Billet Caster | MTPA | 2.37 | 0 | 2.37 | Not yet established | Not yet established |
| 16 | CRM | | | | | | |
| | Hot Rolled Pickled Coils/Sheets | MTPA | 1.5 | 0.54 | 2.04 | In operations | In operations (Consent To Operate received from SPCB) |
| | CR Coils/Sheet | | 1.3 | 0.65 | 1.95 | | |
| | Galvanized Coils/Sheets | | 0.65 | 0 | 0.65 | | |
| | Coated Sheets/Coil | | 0.1 | 0 | 0.1 | | |
| | Any Other Lines | | | | | | |
| 17 | Waste Heat Recovery Based Power Plant | MW | 25 | 20 | 45 | In operations | “25” in operations |
| 18 | Pipe Mill | | | | | | |
| | H Saw Pipes | MTPA | 0.15 | 0.15 | 0.30 | In operations | In operations (Consent To Operate received from SPCB) |
| | L Saw Pipes | MTPA | 0.33 | 0 | 0.33 | | |
| | Coating Plant | MTPA | 0 | 0.48 | 0.48 | | |
| | | | | | | | |

28.21.6 Proposed Auxiliary Facility

| Sr. No | Facility | Unit | Proposed Capacity |
|--------|---------------------------------------|------------|-------------------|
| 1. | Coal briquetting Plant - (1000 TPD) | TPD | 1000 |
| 2. | BF – PCI Project- Pulverized coal | T/Hr | 80 |
| 3. | Lime Kiln (500 TPD) - Lime and Dolime | MT / Month | 15000 |

| | | | |
|-----|--|-----------|---------------|
| 4. | Rotary Kiln (200 TPD) - Calcined Lime | MT/Month | 6000 |
| 5. | Blast Furnace Dust Catcher /Dust separation unit-150 TPD | TPD | 150 |
| 6. | Acid Regeneration Plant - 100 KL & Pickling Line-3 | KL/Day | 100 |
| 7. | BF slag grinding mill (BOO) - 50 TPD | TPD | 50 |
| 8. | New Cooling towers for | | |
| | Mod-1 and 2 | M3/HR | 3900 |
| | Mod-3 and 4 | M3/HR | 5300 |
| | Mod-5 and 6 | M3/HR | 2000 |
| 9. | Slag Conditioning & Metal Recovery plant | TPD | 7500 |
| 10. | Thick Plate Normalizing Furnace | Tons/year | 15000 |
| 11. | Shot blasting machine | Tons/year | 300,000 |
| 12. | VD Cooling Tower | m3/hr | 3x 500m3/hr, |
| 13. | RHD Cooling Tower | m3/hr | 3x 1065m3/hr, |
| 14. | Water Treatment Plant for 500 MW CCPP | m3/hr | 2 x 500 m3/hr |
| 15. | CRM-2 | | |
| | Hot Rolled Pickled Coils/Sheets | MTPA | 3.2 |
| | CR Coils/Sheet | | 2.2 |
| | Galvanized Coils/Sheets | | 1.0 |
| | Annealing coils/Sheets | | 1.0 |
| 16. | Ladle furnace - Existing Liquid Steel 4.6 MTPA (Standby LF-5 for Special grades) | - | - |
| 17. | SMP-1 Fume Extraction System upgradation | - | - |
| 18. | Mod 4 additional VPSA to utilize Corex gas and going forward Coke oven gas | - | - |
| 19. | Hot metal Pretreatment Station Outside Shop (KR Technology) | - | - |
| 20. | Tank Farm-2 with interconnection between PKL-3 & ARP-2 | - | - |
| 21. | Additional Ladle Furnace (LF7) – Standby for Special grades | MTPA | - |

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

| S. No. | Raw Material | Quantity required per annum | | | Source | Distance from site (Kms) | Mode of Transportation |
|--------|----------------|-----------------------------|------------------|------------------|------------------------------------|----------------------------------|------------------------|
| | | Existi- ng | Expansion | Total | | | |
| 1. | Coal Fines | Nil | 365000 MT / Year | 365000 MT / Year | Pellet will be sourced from AMNS's | These conveyors in turn move the | |
| 2. | Polymer Binder | Nil | 14600 MT / | 14600 MT | | | |

| S. No. | Raw Material | Quantity required per annum | | | Source | Distance from site (Kms) | Mode of Transportation |
|--------|--------------------------------------|-----------------------------|--------------------------|--------------------------|--|--|------------------------|
| | | Existing | Expansion | Total | | | |
| | | | Year | / Year | Pelletization Plant located at Visakhapatnam & Paradeep, Flux (Calcinated Lime & Dolomite) produced in-house, Lime stone from Dubai & Oman, Iron Ore lump from Bailadila, Kumba-Australia, Brazil, Coal for Coke Oven plant from Australia (mainly) and Canada, USA, Russia. | coal to coal storage yard. The coal is transported from yard to coke oven plant is by series of conveyors. The coke produced shall be routed through cutting and sizing units. Prime grade coke from this unit will be transported to Blast furnace by conveyor and other fractions shall be stored in bunker, from where coke shall be transported to other consumers by trucks. The by-products produced and chemicals required shall be transported by road vehicles. The internal transportation of materials like refractory, store materials shall be by plant vehicles. All the materials | |
| 3. | Coal Fines | Nil | 88 MT/Hr | 88 MT/Hr | | | |
| 4. | Ferroy Allow (Mn, Ti, Mo, V, B etc.) | Nil | 3-8 Kg/Ton | 3-8 Kg/Ton | | | |
| 5. | Aluminium | Nil | 2.5-6 Kg/Ton | 2.5-6 Kg/Ton | | | |
| 6. | CPC | Nil | 1-1.5 Kg/Ton | 1-1.5 Kg/Ton | | | |
| 7. | Limestone/Dolomite | Nil | 34,500 MT/Month | 34,500 MT/Month | | | |
| 8. | Limestone (6-40 mm) | Nil | 11867 MT/month | 11867 MT/month | | | |
| 9. | Ferroy Allow (Mn, Ti, Mo, V, B etc.) | Nil | 2-20 Kg/Ton | 2-20 Kg/Ton | | | |
| 10. | Aluminium | Nil | 2.8-3.5 Kg/Ton | 2.8-3.5 Kg/Ton | | | |
| 11. | CPC | Nil | 0.1-2Kg/Ton | 0.1-2Kg/Ton | | | |
| 12. | Blast Furnace dust catcher dust | Nil | 150 TPD | 150 TPD | | | |
| 13. | Blast furnace granulated slag | Nil | 50 TPD | 50 TPD | | | |
| 14. | Production Consumables – Steel shots | Nil | 250 Ton/Year | 250 Ton/Year | | | |
| 15. | Flat Steel strip in coil Form | Nil | 5,40,000 MT/Annum | 5,40,000 MT/Annum | | | |
| 16. | Hydrochloric Aci | Nil | 30,000 Liters of 33% con | 30,000 Liters of 33% con | | | |
| 17. | HCl Regeneration | Nil | 127 M ³ /Day | 127 M ³ /Day | | | |

| S. No. | Raw Material | Quantity required per annum | | | Source | Distance from site (Kms) | Mode of Transportation |
|--------|--------------|-----------------------------|-----------|-----------|--------|--------------------------|--|
| | | Existing | Expansion | Total | | | |
| 18. | HR Coils | Nil | 3.85 MTPA | 3.85 MTPA | | | will be covered during transportation through trucks to the site |

28.21.8 The water requirement for the project is estimated as 10118.0 m³ /hr, (Existing 8499 m³/ hr + Proposed 1619 m³/ hr) will be obtained from the Tapi River. The permission for drawl of surface water is obtained from Surat irrigation Department.

28.21.9 The power requirement for the project is estimated as 623 MW, will be obtained from the 400 KV transmission tower line for entire complex.

28.21.10 The capital cost of the project is Rs 6216.58 Crores and the capital cost for environmental protection measures is proposed as Rs 1185.08 Crores. The employment generation from the proposed project / expansion is 500 Nos.

28.21.11 There is no violation under EIA, 2006/court case/show cause/direction related to the project under consideration.

28.21.12 Name of the EIA consultant: M/s Shree Green Consultants. The said consultant is not accredited by QCI/NABET.

28.21.13 Proposed Terms of Reference (Baseline data collection period 1st October 2020 to 31st December 2020)

| Attributes | | Sampling | | Remarks |
|---|---|-----------------|----------------------|---------|
| | | No. of Stations | Frequency | |
| A. Air | | | | |
| a. Meteorological parameters | Temp., RH, Rain Fall, CC, WD, WS | 1 | Continues 3 months | |
| b. AAQ parameters | PM ₁₀ , PM _{2.5} , SO ₂ NO _x CO THC, NMHC, Lead | 8 | 2 times per week | |
| B. Noise | Noise | 8 | Once in study period | |
| C. Water | | | | |
| Surface water/Ground water quality parameters | Colour, pH, EC, Temp., Turbidity, Dissolved Solids, Alkalinity, Total Hardness (as CaCO ₃), Calcium (as Ca ⁺²), Magnesium (as Mg ⁺²), Chlorides (as Cl ⁻) Sulphate (as SO ₄ ⁻²), Fluoride (as F ⁻), Nitrates (as NO ₃ ⁻), Ammonical nitrogen, | 8 + 8 | Once in study period | |

| Attributes | | Sampling | | Remarks |
|---|---|-------------------------|----------------------|---------|
| | Phenolic compound, Boron (as B), Copper (as Cu), Iron (as Fe), Manganese (as Mn) Zinc (as Zn), COD, BOD, DO, Arsenic (as As), Cadmium (as Cd), Chromium (as Cr+6), Lead (as Pb), Mercury (as Hg), Nickel (as Ni), Cyanide (as CN), E-coli, Total Coliform | | | |
| D. Land | | | | |
| a. Soil quality b. Land use | - Bulk Density, Moisture content, Water Holding Capacity Porosity, Permeability, Particle size distribution, Texture Class, pH (10% Solution), Electrical Conductivity Cation Exchange Capacity, Calcium, Magnesium Sodium, Potassium, Phosphorus, Sodium Absorption Ratio (SAR), Nitrogen, Organic Carbon Settlements, Industrial area, Land with scrub, Land without scrub, Mud plot, Salt pans, Water logged area etc. | 8 | Once in study period | |
| E. Biological a. Aquatic b. Terrestrial | Floral Diversity and Faunal Biodiversity | 10 km radius study area | Once in study period | |
| F. Socio-economic parameters | Demography | 10 km radius study area | Once in study period | |

Observations of the Committee

28.21.14 The Committee noted the following:

- i. EC for the plant under expansion at present was granted in March 2016. Under this program PP proposed to close down 4.0 MTPA HBI and 4.6 MTPA SMS -1 and add units like BF, SP, Coke Ovens, By- product Plant, Oxygen Plant, BOF of 4.6 MTPA capacity, Lime Plant, WHRB and Pipe Mill.
- ii. Now PP wants to add some more facilities like Coal briquetting, PCI injection in blast furnaces, LF, Lime kilns, BF dust catcher, Acid Regeneration Plant, BF slag grinding unit, New cooling towers, Normalising Furnace in Plate mill, Shot blasting Machines, Cooling tower and a new CRM 2 at a total cost of 6216.58 Cr.
- iii. Above additions are the balancing facilities and would not have any impact of the sanctioned capacity if crude steel production i.e., 9.6 MTPA.
- iv. At present the plant is housed in 770 ha land. No additional land is required for addition of these facilities.
- v. Additional water requirement of 38856 KLD shall be met from Tapti River.

Recommendations of the Committee

- 28.21.15 In view of the foregoing and 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. No construction activity/infringement will take place in flood plain of Tapi river situated in the vicinity of the project site. The flood plain corresponding to HFL of Tapi river shall be depicted and same may be verified by an authority not below the rank of District Magistrate/Executive Engineer of the State Government.
 - ii. The PP will raise green belt in 33% of the total project area. This will include 50 m wide green belt along the boundary of the plant situated towards the Tapi river.
 - iii. PM levels from existing and new stacks shall be maintained at less than 30 mg/Nm³ except for Coke Oven chimney where it shall be 50 mg/Nm³.
 - iv. Emission from ARP stack shall be less than 10 mg/Nm³ of HCl.
 - v. Zn dust shall be monitored in AAQ in CRM complex and data shall be submitted in EIA report.
 - vi. HW generated in CRM shall be disposed of in TSDF.
 - vii. Oily sludge from CRM and other mills shall be incinerated.
 - viii. 100 % Solid waste generated shall recycled/reused or sold.
 - ix. Treated effluent from various ETPs including BOD plant of Coke ovens shall be recycled and reused inside the steel works.
 - x. Mangroves survey shall be carried out and study report shall be furnished.
 - xi. CRZ mapping of the project site shall be carried out through an authorized agency inter-alia including HTL/LTL mapping, CRZ land classification along with super-imposition of facilities envisaged in the project.
 - xii. Cumulative impact assessment shall be carried out for the entire facility within the boundary of the plant complex.
 - xiii. EMPs for social and infrastructure development shall be based on the assessment of social needs and the issues raised in public hearing.
 - xiv. CEMS shall be provided on all process stacks and the signal shall be received in plant control room for central control of APCDs installed in the plant.
 - xv. All roads in the plant shall be paved and industrial vacuum cleaners shall be used regularly to clean roads to reduce fugitive emissions.
 - xvi. Action plan to reduce the fugitive emissions from the plant shall be furnished.
 - xvii. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.
 - xviii. Action plan for rain water harvesting shall be furnished.
 - xix. Ultralow NO_x burner with three stage combustion, flue gas recirculation and auto combustion control system shall be used.
- 28.22 Expansion of Integrated Steel Plant from 4.5 MTPA Liquid Steel to 25.2 MTPA Liquid Steel (24.79 MTPA crude steel) and 12.5 MTPA Cement by **M/s. Jindal Steel & Power Limited** located at village Kerjang, tehsil Chhendipada, **District Angul, Odisha** [Online Proposal No.

IA/OR/IND/190832/2020, File No. J-11011/365/2006-IA. II(I)] – **Prescribing of Terms of Reference** – regarding.

28.22.1 M/s. Jindal Steel & Power Limited has made an application online vide proposal no. IA/OR/IND/190832/2020 dated 13/01/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & nonferrous), 3(b) Cement plants and 4(b) Coke oven plants under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by Project proponent

28.22.2 The project of M/s Jindal Steel & Power Ltd. located in Kerjang Village, Chhendipada Tehsil, Angul District, Odisha State is for expansion of Integrated Steel Plant from 4.5 MTPA Liquid Steel to 25.2 MTPA Liquid Steel (24.79 MTPA Crude Steel) and 12.5 MTPA Cement.

28.22.3 Environmental site settings

| S No. | Particulars | Details | Remarks |
|-------|---|---|---|
| i. | Total land | 2224.96 ha [1416.06 ha (Existing) +808.902 ha (Additional)] | (Forest Land –190.62 hectares, Govt. Land – 413.54 hectares and Private Land –1620.78 hectare). JSPL has so far acquired about 1950.20 ha of land and about 275.70 ha land will be further acquired. |
| ii. | Existence of habitation & involvement of R&R, if any. | Yes, R&R is applicable | Project Displaced Families (PDFs) and Project Affected Families (PAFs) have been identified within the region comprising of Badakerjang & Jamunda Jungle and 3 villages – Badakerjang, Jarada and Paripara. Addressal of R&R issues for expansion is currently under process. |
| iii. | Latitude and Longitude of the project site | Latitude - 20 ⁰ 51’28.36” to 20 ⁰ 54’ 35.85” North Longitude - 84 ⁰ 55’26.45” to 85 ⁰ 00’45.50” East | |
| iv. | Elevation of the project site | 153-213 m | |
| v. | Involvement of Forest land if any. | Forest Land in existing & expansion project- 190.62 hectares | Forest Clearance Status: MoEFCC vide its letter no. 8-75/2008-FC dated 28.10.2010 granted FC to 168.232 ha. |

| S No. | Particulars | Details | Remarks |
|-------|--|---|--|
| | | | Application for remaining 22.30 ha of forest land, required for proposed expansion project is under preparation & will be submitted shortly. |
| vi. | Water body exists within the project site as well as study area | <ul style="list-style-type: none"> • Kurdabhali Nala (Adjacent to plant site) • Parang minor irrigation project (Adjacent to plant site) • Nandira Jor (Outlet of Parang Minor Irrigation Project) • Nigra Nala (400 m in WSW direction) • Derjanga Reservoir (Minor Irrigation project) (2 km in SE direction) • Angul Main Canal (3.2 km in ESE direction) Various seasonal nalas and Jor are in study area | |
| vii. | Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area | Not Applicable | |

28.22.4 The existing project was accorded environmental clearance vide letter no. J-11011/365/2006 dated 22/02/2007 and amended on 14/11/2008, 08/02/2017, 26/06/2018, 22/01/2019 and 18/01/2021. The existing EC has been implemented partly and the same has been commissioned. Consent to Operate for the existing units were accorded for each unit by Odisha State Pollution Control Board (OSPCB). The latest CTO was granted by OSPCB vide letter no. 367/IND-I-CON-6310 dated 20.03.2020. The validity of CTO is up to 31.03.2021.

28.22.5 Implementation status of the existing EC dated 22/02/2007 is as follows:

| S No. | Facilities | Units | As per existing EC | Implementation status as on 31.12.2020 | Production as per CTO |
|-------|---------------|-----------------------|----------------------|--|-----------------------|
| i. | Pellet Plant | MTPA | 5.0 | Not Implemented | - |
| ii. | Coal Gasifier | Nm ³ /year | 4000x10 ⁶ | 2100x10 ⁶ | 1260x10 ⁶ |

| S No. | Facilities | Units | As per existing EC | Implementation status as on 31.12.2020 | Production as per CTO |
|-------|---------------------------------------|-------------|--------------------|--|-----------------------|
| iii. | DRI plant | MTPA | 4.0 | 2.0 | 1.8 |
| iv. | Blast Furnace | MTPA | 4.25 | 4.25 | 3.2 |
| v. | Coke Oven | MTPA | 2.0 | 2.0 | 2.0 |
| vi. | Sinter Plant | MTPA | 5.0 | 5.0 | 4.0 |
| vii. | SMS | MTPA | 6.0 | 6.0 | 4.5 |
| viii. | Rolling mills | MTPA | 6.0 | 2.9 | 2.6 |
| ix. | Ferro-alloy plant | MTPA | 0.08 | Not Implemented | - |
| x. | Lime Dolime plant | TPD | 3000 | 2200 | 1000 |
| xi. | Process gas/pressure recovery turbine | MW | 62 | 30.5 | 30.5 |
| xii. | Coal based Power Plant | MW | 810 | 810 | 810 |

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

| S No | Name of the unit | Existing | | Expansion | | Total (Existing+ Proposed) | |
|------|-------------------------|--------------------------------|--|--|------------------------|---|--|
| | | Configuration | Capacity | Configuration | Capacity | Configuration | Capacity |
| 1. | Coal Gasification plant | 7 x 37,500 Nm ³ /hr | 2100x10 ⁶ Nm ³ /year | - | - | 7 x 37,500 Nm ³ /hr | 2100x10 ⁶ Nm ³ /year |
| 2. | DRI Plant | 1 x 2 MTPA | 2 MTPA* | 1x2 MTPA 2x2.7 MTPA | 7.4 MTPA | 2x2 MTPA 2x2.7 MTPA | 9.4 MTPA |
| 3. | Coke Oven | 4 x 72 ovens | 2 MTPA | 2 x 63 ovens 6 x 54 ovens | 1.55 MTPA 4.05 MTPA | 4 x 72 ovens 2 x 63 ovens 6 x 54 ovens | 7.6 MTPA |
| 4. | Sinter Plant | 490.5 m ² | 5 MTPA | 490.5 m ² | 5.75 MTPA | 2 x 490.5 m ² | 10.75 MTPA |
| 5. | Blast Furnace | 1 x 4554 m ³ | 4.25 MTPA | 1 x 5400 m ³ 2 x 6000 m ³ | 4.5 MTPA 10 MTPA | 1 x 4554 m ³ 1 x 5400 m ³ 2 x 6000 m ³ | 18.75 MTPA |
| | Steel Making | | | | | | |
| 6. | Electric Arc Furnace | 1 x 250 T | 1.5 MTPA (3 MTPA**) | 2 x 250 T | 4.5 MTPA | 3 x 250 T | 7.5 MTPA |
| 7. | Basic Oxygen Furnace | 1 x 250 T | 3 MTPA | 1 x 250 T 3 x 380 T | 3 MTPA 11.7 MTPA | 2 x 250 T 3 x 380 T | 17.7 MTPA |
| 8. | Plate mill | 1 x 1.5 MTPA | 1.5 MTPA*** | - | 0.5 MTPA | - | 2.0 MTPA |
| 9. | Bar Mill | 1 x 1.4 MTPA | 1.4 MTPA | - | - | 1 x 1.4 MTPA | 1.4 MTPA |
| 10. | Wire Rod Mill | - | - | 1 x 1.2 MTPA | 1.2 MTPA | 1 x 1.2 MTPA | 1.2 MTPA |
| 11. | Hot Rolling mill | - | - | 1 x 3.6 MTPA 3 x 6 MTPA | 3.6 MTPA 18 MTPA | 1 x 3.6 MTPA 3 x 6 MTPA | 21.6 MTPA |

| S No | Name of the unit | Existing | | Expansion | | Total (Existing+ Proposed) | |
|------|---------------------------------|----------------------------|--------------|---|------------|--|----------------------|
| | | Configuration | Capacity | Configuration | Capacity | Configuration | Capacity |
| 12. | CRM Complex | - | - | 3x2.5 MTPA | 7.5 MTPA | 3x2.5 MTPA | 7.5 MTPA |
| 13. | Calcination plant | 2 x 600 TPD 2 x 500 TPD | 2200 TPD**** | 13 x 600 TPD | 7800 TPD | 15x600 TPD | 10000 TPD |
| 14. | Oxygen Plant | 2x1200 TPD 3 x200 TPD | 3000 TPD | 2x2000 TPD 3x3600 TPD | 14,800 TPD | 2x1200 TPD 3x200 TPD 2x2000 TPD 3x3600 TPD | 17,800 TPD |
| 15. | Power Plant | 6 x 135 MW (Coal based) | 810 MW | 1 x 300 MW 1 x 250 MW (Gas based) | 550 MW | (Coal based) 6 x 135 MW (Gas based)1 x 300 MW 1 x 250 MW | 810 MW 550 MW |
| 16. | Ferro Alloy plant | - | - | 1x18 MVA + 1x15 MVA 4x45 MVA + 1x15 MVA 1x6 MVA | 0.376 MTPA | 1x18 MVA + 1x15 MVA 4x45 MVA + 1x15 MVA 1x6 MVA | 0.376 MTPA |
| 17. | Pellet Plant | - | - | 4 x 7 MTPA | 28 MTPA | 4 x 7 MTPA | 28 MTPA |
| 18. | Cement Plant (Grinding unit) | - | - | 3x3.5 MTPA 1 x 2 MTPA | 12.5 MTPA | 3 x 3.5 MTPA 1 x 2 MTPA | 12.5 MTPA |
| 19. | Iron Ore slurry | - | - | 1x18 MTPA 1x18 MTPA | 36 MTPA | 1x 18 MTPA 1x 18 MTPA | 36 MTPA |

*Installed. Consent to Operate (CTO) is for 1.8 MTPA

**Installed. CTO is for 1.5 MTPA

**Installed. CTO is for 1.2 MTPA

****Installed. CTO is for 1000 TPD

28.22.7 The proposed Ferro Alloy plant will produce Fe-Cr (ferro-chrome), Fe-Mn (Ferro Manganese) and Si-Mn (Silico-Manganese). The proposed Ferro Alloy plant will comprise of the following:

- 1x18 MVA + 1x15 MVA furnaces for producing 55,101 TPA of Fe-Cr,
- 4x45 MVA + 1x15 MVA furnaces for producing 312, 410 TPA of Si-Mn,
- 1x6 MVA furnace for producing 9,190 TPA of Fe-Mn.

28.22.8 The proposed 7.5 MTPA CRM complex will comprise of 03 modules of 2.5 MTPA each. Each module will comprise of the following units:

- One Pickling line coupled with tandem cold mill (PLTCM) of 2.5 MTPA capacity with matching capacity of Acid regeneration plant. Pickling media used would be hydrochloric acid.

- b. Two continuous annealing line of 0.75 MTPA capacity.
- c. Two continuous galvanizing line (CGL) of 0.5 MTPA capacity each. The coating would be of various kind as per technology available and market requirement i.e. galvalume, galvanneal, Alu-Si, Zn-Mg etc.
- d. A part of the Galvanised coils will be further processed in two color coating line (CCL) of 0.25 MTPA capacity each for production of colour coated coils.
- e. Apart from the cold rolled product in coil form, finished product in slit form and sheet form would also be produced. Facilities i.e. slitting line and shearing line would be provided for the same.

Thus the complete CRM complex will comprise of 3x2.5 MTPA Pickling Line coupled with Tandem Cold Mill with matching capacity of Acid Regeneration Plant, 6 x 0.75 MTPA Continuous Annealing Line, 6 x 0.5 MTPA Continuous Galvanizing Line and 6 x 0.25 MTPA Color Coating Line.

28.22.9 The expansion proposal also comprises of a cement grinding unit of around 12.5 MTPA capacity. It is proposed to install 3 modules of 3.5 MTPA each for production of Ordinary Portland Cement (OPC), Ground Granulated Blast Furnace Slag (GGBS), Portland Slag Cement (PSC), Portland Composite Cement (PCC) and one module of 2.0 MTPA to produce Portland Pozzolona Cement (PPC) to utilize the fly ash generated.

28.22.10 The details of the major raw material requirement for the existing as well as expansion project along with its source and mode of transportation is given as below:

| Sl. No. | Raw Material | Quantities required per annum | | | Source | Mode of Transportation |
|---------|-----------------|-------------------------------|-----------|------------|--|------------------------|
| | | Existing | Expansion | Total | | |
| 1 | Non coking coal | 9,159,400 | - | 9,159,400 | Collieries/mines of Mahanadi Coalfields Limited (MCL) in Talcher/Jharsuguda and also from mines of South Eastern Coalfields Limited (SECL) in Bilaspur region | Sea, Rail |
| 2 | Coking coal | 2,990,244 | 8,370,150 | 11,360,380 | International market (Mozambique, Australia and Canada) | Sea, Rail |
| 3 | Iron ore fines | 3,416,950 | 4,085,200 | 7,502,150 | Procured from the Joda-Barbil regions of Odisha and also from NMDC Limited through auction | Rail |
| 4 | Limestone | 1,401,906 | 7,043,384 | 8,445,290 | SMS grade - Middle East Countries (UAE and Oman). BF grade - Jukehi-Katni-Niwar area in Central India or the quarries located in Jaggayyapetta region, Andhra Pradesh | Sea, Rail |
| 5 | Dolomite | 1,275,341 | 2,797,914 | 4,073,255 | Jaggayyapetta region, Andhra Pradesh or mines | Sea, Rail |

| | | | | | | |
|----|-----------------|---------|------------|------------|--|----------------|
| | | | | | in Katni-Bilaspur region, Central India | |
| 6 | Quartz | 214,454 | 765,078 | 979,532 | Domestic | Rail/ Road |
| 7 | Anthracite | - | 470,958 | 470,958 | International market | Sea, Rail |
| 8 | Bentonite | - | 311,100 | 311,100 | Domestic | Rail |
| 9 | PCI | 953,129 | 3,251,850 | 4,204,979 | International market (Australia, South Africa and Indonesia) | Sea, Rail |
| 10 | Iron Ore Slurry | - | 40,000,000 | 40,000,000 | Procured from Barbil regions of Odisha | Slurry pipe |
| 11 | Lump Ore | 8,400 | 412,088 | 420,488 | Joda Barbil region | Rail |
| 12 | Mn Ore | - | 404,570 | 454,000 | Domestic | Rail/ Road |
| 13 | Cr ore | - | 69,090 | 74,560 | Domestic, Sukinda region | Road |
| 13 | Clinker | - | 5,729,500 | 5,729,500 | Domestic/ International market | Sea,Rail, Road |
| 14 | Gypsum | - | 312,500 | 312,500 | Domestic | Rail/ Road |
| 15 | Pellet | - | 6,985,050 | 6,985,050 | Domestic | Rail |

28.22.11 The water requirement for the existing as well as for the expansion project is estimated as 16020 m³/hour, which will be obtained from the Brahmani River at a distance of 30 kms.

28.22.12 The maximum power demand for the project after expansion is estimated as 2972 MW, out of which 1345 MW will be available from the captive power plant and the remaining 1627 MW will be sourced from external grid.

28.22.13 The capital cost of the project is Rs. 119,952 Crores. The employment generation from the existing and proposed expansion project is 21081 Nos.

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

28.22.15 Name of the EIA consultant: M/s J.M. EnviroNet Pvt. Ltd. [S.No. 39, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021]

28.22.16 Proposed Terms of Reference (Baseline data collection period: Dec'20- Feb'21)

| S. No. | Environmental Component | Primary data | | |
|--------|-------------------------|--|-------------------------------|--|
| | | Parameters | Frequency | Monitoring / Sampling Locations |
| 1. | Land | Agriculture, Habitation, Industry, Stony waste/ Quarries, Forest area, Plantation/ Vegetation, Open scrub, Water bodies etc. | Once in a Study period Season | 10 km radius r from Project site (Core zone) |
| 2. | Meteorology | Temperature, Relative Humidity, Wind Speed, Wind Direction, Rainfall | Hourly | 01 (Project site) |
| 3. | Air | PM ₁₀ , PM _{2.5} , SO ₂ , NO ₂ , CO and PAHs | twice a week (24 hourly) | 12 |

| S. No. | Environmental Component | Primary data | | |
|--------|----------------------------|--|-------------------------------------|---|
| | | Parameters | Frequency | Monitoring / Sampling Locations |
| 4. | Noise | Equivalent noise levels in Leq in dB (A) | Once in a season (day & night time) | 12 |
| 5. | Water | | | |
| a. | Surface Water | Parameters as per IS 10500 - 2012 | Once | 15 –(As per actual condition of water availability in surface water bodies) |
| b. | Ground Water | | Once | |
| 7. | Soil | Parameters As per IS 2720/USDA | Once | 08 |
| 8. | Biological Environment | Flora and fauna | Once | Study area |
| 9. | Socio-Economic Environment | Socio-economic survey | Once | Study area |

28.22.17 It was apprised to the EAC that as per the provisions of EIA Notification, 2006, all the facilities sanctioned under the EC has to be commissioned within the EC validity period. If only part of the facilities commissioned within the EC validity period then the validity of the EC is construed only to the commissioned facilities and not for all the sanctioned facilities.

Observations of the Committee

28.22.18 The Committee noted the following:

- i. The existing project obtained Environment Clearance during 22/02/2007 for setting up of 6 MTPA Integrated Steel plant (ISP). However, as per the implementation status furnished by the PP, only 4.5 MTPA ISP has been commissioned. In view of this, the instant expansion proposal may be titled as expansion from 4.5 to 25.2 MTPA in place of expansion from 6.0 to 25.2 MTPA. Further, no construction activity shall be undertaken with respect to the unimplemented facilities envisaged under the EC dated 22/02/2007 as the EC validity period has already been expired.
- ii. There are several water bodies exists in the vicinity of the project site.
- iii. Out of total land 2224.96 ha, 190.62 ha forest land is involved.
- iv. Major facilities envisaged for expansion are pellet plant, sinter plant, coke ovens, gas based DRI, Blast Furnace, SMS, O₂ Plant, HSM, CRM, WRM and CPP.
- v. Water requirement for the plant is 16062 m³/hr and that would be sourced from Brahmani River 30 Km away from the plant.
- vi. Plant shall be commissioned in 7 years at a total cost of 119952 Cr.
- vii. All major Raw Materials shall be transported by Rail.

- viii. COG shall be subjected to desulphurization to produce elemental sulphur.
- ix. Ammonia recovered from COG shall be incinerated.
- x. Iron Ore shall be received in slurry form from Barbil area through pipeline of 600 mm (Distance 200 km).
- xi. Maximized Emission Reduction of Sintering (MEROS) process shall be adopted to reduce SO₂, heavy metals, and Organic compounds from flue gases of sinter plants.
- xii. Dry gas cleaning shall be adopted for BF and BOF gas.
- xiii. A total of 415 PDF and 6750 PAP shall be covered under R&R program of the project.

Recommendations of the Committee

28.22.19 In view of the foregoing and 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. Cumulative impact assessment for the existing and proposed expansion project shall be carried out.
- ii. No construction activity shall be undertaken with respect to the unimplemented facilities envisaged under the EC dated 22/02/2007.
- iii. No construction activity/infringement will take place in flood plain of water bodies [Kurdabhali Nala, Parang minor irrigation project and Nigra Nala] situated in the vicinity of the project site.
- iv. The PP will raise green belt in 35% of the total project area. This will include 50 m wide green belt along the boundary of the plant situated towards the water bodies [Kurdabhali Nala, Parang minor irrigation project and Nigra Nala].
- v. Iron ore linkage documents (or) MoU for the iron ore supply shall be submitted.
- vi. Status of the stage I Forest clearance for the forest land and the land acquisition details as per MoEF&CC O.M. dated 7/10/2014 shall be submitted.
- vii. Action plan for phenolic wastewater treatment from Coal Gasification plant shall be submitted.
- viii. Action plan for recycling of tar sludge from gasifier and Coke oven shall be submitted.
- ix. Coal washery rejects shall be dewatered in filter press for dry disposal. Tailing pond shall not be permitted.
- x. Fine dust collected from the plant shall be briquetted for recycling to sinter plant.
- xi. Treated water from ETPs including BOD plant of Coke Ovens shall be reused and recycled. Action plan for no effluent discharge outside the plant boundary shall be submitted.
- xii. BOD Plant sludge shall be recycled to coke ovens.
- xiii. Sinter Cooler waste heat recovery system shall be installed.
- xiv. Dry gas cleaning shall be adopted for BF and BOF gas.
- xv. BF shall be equipped with TRT, Cast House/Stock House ventilation and stove waste gas heat recovery system
- xvi. SAFs and EAFs shall have 4th hole extraction system for control of air pollution.

- xvii. Waste Heat Recovery system shall be installed on Flue gases of EAF.
- xviii. BOF and EAF shall have dog houses and secondary fume extraction system.
- xix. PM level from process stacks shall not exceed 30 mg/Nm³. All Bag houses shall use PTFE dipped bags.
- xx. Acid Recovery Plant shall be installed in Pickling section of CRM.
- xxi. Hazardous Wastes generated in CRM shall be disposed of in SLF/TSDf.
- xxii. Oily sludge from Mills shall be incinerated.
- xxiii. HCL fume concentration in the stack of ARP shall not exceed 10 mg/Nm³.
- xxiv. Zinc dust shall be monitored in AAQ of the plant and data shall be furnished in the EIA report.
- xxv. Briquetting and Jigging plant shall be installed in Ferro Alloys Plant.
- xxvi. FeCr slag shall be subjected to TCLP to finalize if it could be used for construction or should be sent to TSDf.
- xxvii. Action plan for 100 % solid waste utilization shall be submitted. HW shall be sent to TSDf and maximum storage capacity for HW in the plant complex shall not exceed 90 days. MoU for the hazardous waste utilization shall be submitted along with the EIA report.
- xxviii. All 12 parameters as per AAQ norms shall be monitored at all the relevant locations and data shall be furnished in the EIA report.
- xxix. EMPs for social and infrastructure development shall be based on the assessment of social needs and the issues raised in public hearing.
- xxx. CEMS shall be provided on all process stacks and the signal shall be received in plant control room for central control of APCDs installed in the plant.
- xxxi. Action plan to control the fugitive emissions shall be furnished.
- xxxii. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.
- xxxiii. Extensive rain water harvesting shall be practiced in the plant.
- xxxiv. Ultralow NOx burner with three stage combustion, flue gas recirculation and auto combustion control system shall be used.
- xxxv. Traffic study shall be carried out inter-alia including existing road details with traffic load, proposed quantum of material to be transported by sea/rail/road with anticipated vessels/rakes/vehicles details, line source modelling and infrastructure strengthening details etc., These details shall be included in the EIA report.
- xxxvi. Separate chapter on cyclone/ disaster management shall be prepared and included as a separate chapter in the EIA report.
- xxxvii. Mass balance as well as energy balance for the integrated steel plant shall be submitted.
- xxxviii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement it as per MoEF&CC O.M. dated 30/09/2020 shall be clearly provided.

xxxix. Performance evaluation of the existing pollution control systems shall be carried out and report shall be submitted.

28.23 Establishment of DRI Kilns (1,98,000 TPA), Induction Furnace with matching LRF & CCM (Billets / Ingots / Hot Billets) (1,98,000 TPA), Rolling Mill (TMT Bars / Structural Steel) 1,98,000 TPA, Ferro Alloy Unit 2 x 9 MVA (FeSi-14000 TPA / FeMn-50400 TPA / SiMn-28800 TPA / FeCr-30000 TPA / Pig Iron- 50400 TPA, WHRB based Power Plant - 15 MW & CFBC based Power Plant - 16 MW by **M/s. Risen Industries Private Limited** located at Sarda Village, Berla Tehsil, **Bemetara District, Chhattisgarh** [Online Proposal No. IA/CG/IND/193123/2021, File No. J-11011/16/2021-IA.II(I)] – **Prescribing of Terms of Reference** – regarding.

28.23.1 M/s. Risen Industries Pvt. Ltd. has made an application online vide proposal no. IA/CG/IND/193123/2021 dated 14/01/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S.No. 3 (a) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by Project proponent

28.23.2 The project of M/s. Risen Industries Pvt. Ltd. is located at Khasra No. 171, 172, 174, 178, 179, 173/1, 173/2, 175/1, 175/2 & 183/1 at Sarda Village, Berla Tehsil, Bemetara District, Chhattisgarh for setting up of new Steel plant for production of 0.198 MTPA of TMT bars / Structural Steel.

28.23.3 Environmental site settings:

| S.No. | Particulars | Details | Remarks | | | | | | |
|--------------------------------|---|---|---|----------|---------------|----------|--------------------------------|----------|-----|
| i. | Total Land | 17.27 ha. (42.68 Acres) [Private land] | Land Use: Unirrigated Agricultural Land | | | | | | |
| ii. | Existence of habitation & involvement of R & R, if any | No habitation exists in project site; hence no R & R is involved. | --- | | | | | | |
| iii. | Latitude and Longitude of the project site | 21°36'22.14"N 81°33'31.15"E | --- | | | | | | |
| iv. | Elevation of the project site | Elevation of project site – 262 m to 265 m | --- | | | | | | |
| v. | Involvement of Forest land, if any | No Forest land is involved in the project site. | --- | | | | | | |
| vi. | Water body exists within the project site as well as study area | Project site: Nil Study area: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Water Body</th> <th style="width: 50%;">Distance</th> </tr> </thead> <tbody> <tr> <td>Seonath River</td> <td>1.8 Kms.</td> </tr> <tr> <td>Saran Nallah (Seasonal Nallah)</td> <td>Adjacent</td> </tr> </tbody> </table> | Water Body | Distance | Seonath River | 1.8 Kms. | Saran Nallah (Seasonal Nallah) | Adjacent | --- |
| Water Body | Distance | | | | | | | | |
| Seonath River | 1.8 Kms. | | | | | | | | |
| Saran Nallah (Seasonal Nallah) | Adjacent | | | | | | | | |

| S.No. | Particulars | Details | Remarks |
|-------|--|---------|---------|
| vii. | Existence of ESZ/ESA/National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. if any within the study area | Nil | --- |

28.23.4 The proposed project is a Greenfield project. Consent to Establishment CTE will be obtained after getting Environment Clearance from MoEF&CC, New Delhi. Consent to Operate (CTO) will be obtained after getting CTE from CECB, Chhattisgarh.

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

| S.No. | Units (Products) | Plant Configuration (Production Capacity) |
|-------|--|--|
| 1. | DRI Kilns (Sponge Iron) | 2 x 200 TPD & 2 x 100 TPD (1,98,000 TPA) |
| 2. | Induction Furnace (Billets / Ingots / Hot Billets) | 4 x 15 T (1,98,000 TPA) |
| 3. | Rolling Mill (TMT bars / Structural Steel) (85 % Hot charging with Hot Billets and remaining 15% through RHF with LDO as fuel) | 1 x 600 TPD (1,98,000 TPA) |
| 4. | Power Plant (Electricity) | 31 MW (15 MW WHRB + 16 MW CFBC) |
| 5. | Ferro Alloys Unit (FeSi / FeMn / SiMn / FeCr / Pig Iron) | 2 x 9 MVA (FeSi-14000 TPA / FeMn-50400 TPA / SiMn-28800 TPA / FeCr-30000 TPA/ Pig Iron- 50400 TPA) |

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

| S.No. | Raw Material | Quantity (TPA) | Sources | Distance from Site (in Kms.) | Mode of Transport | |
|-------|---|----------------|-----------------------------------|--------------------------------|---|---|
| 1. | For DRI Kilns (Sponge Iron) – 1,98,000 TPA | | | | | |
| a) | Pellets (100 %) | 2,77,200 | Orissa & Chhattisgarh | ~ 500 Kms. | By rail & road (through covered trucks) | |
| | | | or | | | |
| b) | Iron ore (100%) | 3,16,800 | Barbil, Orissa NMDC, Chhattisgarh | ~ 500 Kms. | By rail & road (through covered trucks) | |
| c) | Coal | Indian | 2,57,400 | SECL Chhattisgarh / MCL Odisha | ~ 500 Kms. | By rail & road (through covered trucks) |

| S.No. | Raw Material | | Quantity (TPA) | Sources | Distance from Site (in Kms.) | Mode of Transport |
|-----------|---|---------------|-----------------|---|------------------------------|--|
| | | Imported | 1,64,700 | Indonesia / South Africa / Australia | ~ 600 Kms. (from Vizag Port) | Through sea route, rail route & by road (through covered trucks) |
| d) | Dolomite | | 9,900 | Chhattisgarh | ~ 100 Kms. | By road (through covered trucks) |
| 2. | For Steel Melting Shop (MS Billets/ Ingots/Hot Billets) – 1,98,000 TPA | | | | | |
| a) | Sponge Iron | | 1,98,000 | Own generation | ---- | By Covered Conveyers |
| b) | MS Scrap / Pig Iron | | 30,000 | Chhattisgarh | ~ 100 Kms. | By road (through covered trucks) |
| c) | Ferro alloys | | 10,000 | Own generation | --- | By road (through covered trucks) |
| 3. | For Rolling Mill through Hot charging (Rolled Products) – 1,98,000 TPA | | | | | |
| a) | Hot Billets / MS Billets / Ingots | | 2,06,000 | Own generation & Purchased from outside | --- ~ 100 Kms. | By Covered Conveyers By road (through covered trucks) |
| b) | LDO / LSHS | | 10,000 Kl/annum | Nearby IOCL Depot | ~ 100 Kms. | By road (through Tankers) |
| 4. | For CFBC Boiler [Power Generation 16 MW] | | | | | |
| a) | Indian Coal (100 %) | | 86,400 | SECL Chhattisgarh / MCL Odisha | ~ 500 Kms. | By rail & road (through covered trucks) |
| OR | | | | | | |
| b) | Imported Coal (100 %) | | 55,000 | Indonesia / South Africa / Australia | ~ 600 Kms. (from Vizag Port) | Through sea route, rail route & by road (through covered trucks) |
| OR | | | | | | |
| c) | Dolochar + Indian Coal | Dolochar | 39,600 | In plant generation | --- | through covered conveyors |
| | | Indian Coal | 69,000 | SECL Chhattisgarh / MCL Odisha | ~ 500 Kms. | By rail & road (through covered trucks) |
| OR | | | | | | |
| d) | Dolochar + Imported Coal | Dolochar | 39,600 | In plant generation | --- | through covered conveyors |
| | | Imported Coal | 26,200 | Indonesia / South Africa / Australia | ~ 600 Kms. (from Vizag Port) | Through sea route, rail route & by road (through covered trucks) |
| 5. | For Ferro Alloys (2 x 9 MVA) | | | | | |
| 6 (i) | <i>For Ferro Silicon – 14,000 TPA</i> | | | | | |
| a) | Quartz | | 24300 | Chhattisgarh / Andhra Pradesh | ~ 500 Kms. | By road (through covered trucks) |
| b) | LAM coke | | 18900 | Andhra Pradesh | ~ 500 Kms. | By road (through covered trucks) |
| c) | MS Scrap / Mill scales | | 4230 | Inhouse Generation | --- | By road (through covered trucks) |
| d) | Electrode paste | | 360 | Maharashtra / West Bengal | ~ 300 Kms. | By road (through covered trucks) |
| 6 (ii) | <i>For Ferro Manganese – 50,400 TPA</i> | | | | | |

| S.No. | Raw Material | Quantity (TPA) | Sources | Distance from Site (in Kms.) | Mode of Transport |
|---------|--|----------------|--|--|---|
| a) | Manganese Ore | 68400 | MOIL / OMC | ~ 500 Kms. | By Rail & Road (through covered trucks) |
| b) | LAM coke | 19800 | Andhra Pradesh | ~ 500 Kms. | By road (through covered trucks) |
| c) | Dolomite | 8100 | Chhattisgarh / Andhra Pradesh | ~ 500 Kms. | By road (through covered trucks) |
| d) | MS Scrap / Mill scales | 7200 | Inhouse Generation | --- | By road (through covered trucks) |
| e) | Electrode Paste | 630 | Maharashtra / West Bengal | ~ 300 Kms. | By road (through covered trucks) |
| 6 (iii) | <i>For Silico Manganese – 28,800 TPA</i> | | | | |
| a) | Manganese Ore | 48600 | MOIL / OMC | ~ 500 Kms. | By Rail & Road (through covered trucks) |
| b) | LAM Coke | 16200 | Andhra Pradesh | ~ 500 Kms. | By road (through covered trucks) |
| c) | FeMn. Slag | 30294 | In house generation | --- | ---- |
| d) | Dolomite | 7380 | Chhattisgarh / Andhra Pradesh | ~ 500 Kms. | By road (through covered trucks) |
| e) | Electrode paste | 630 | Maharashtra / West Bengal | ~ 300 Kms. | By road (through covered trucks) |
| f) | Quartz | 7740 | Chhattisgarh / Andhra Pradesh | ~ 500 Kms. | By road (through covered trucks) |
| 6 (iv) | <i>For Ferro Chrome – 30,000 TPA</i> | | | | |
| a) | Chrome Ore | 56700 | Sukinda, Odisha Import, South Africa | ~ 500 Kms. ~ 600 Kms. (from Vizag Port) | By road (through covered trucks) Through sea route, rail route & by road (through covered trucks) |
| b) | LAM Coke | 19800 | Andhra Pradesh | ~ 500 Kms. | By road (through covered trucks) |
| c) | Quartz | 8100 | Chhattisgarh / Andhra Pradesh | ~ 500 Kms. | By road (through covered trucks) |
| d) | MS Scrap / Mill Scale | 2700 | Inhouse Generation | --- | By road (through covered trucks) |
| e) | Magnetite / Bauxite | 5400 | Chhattisgarh / Maharashtra | ~ 500 Kms. | By road (through covered trucks) |
| f) | Electrode Paste | 540 | Maharashtra / West Bengal | ~ 300 Kms. | By road (through covered trucks) |
| 6 (iv) | <i>For Pig Iron – 50,400 TPA</i> | | | | |
| a) | Iron ore / Sinter | 91800 | Barbil, Odisha NMDC, Chhattisgarh | ~ 500 Kms. | By road (through covered trucks) |
| b) | LAM Coke | 43200 | Chhattisgarh / Andhra Pradesh | ~ 500 Kms. | By road (through covered trucks) |
| c) | Dolomite | 5940 | Chhattisgarh / Andhra Pradesh | ~ 500 Kms. | By road (through covered trucks) |
| d) | Quartz | 3060 | Chhattisgarh / Andhra Pradesh | ~ 500 Kms. | By road (through covered trucks) |

- 28.23.7 Water consumption for the proposed project will be 1210 KLD, which will be met from Seonath River (at a distance of 1.8 Kms. from project site). Permission for drawl of water from Water Resources Department of Government of Chhattisgarh will be obtained.
- 28.23.8 The total power requirement for the proposed project will be about 37.6 MW, this will be met mainly with captive power plant of 31 MW (i.e. 15 MW WHRB and 16 MW CFBC based power plant), remaining 6.6 MW power will be sourced from the State Grid.
- 28.23.9 The capital cost of the project is Rs. 370.0 Crores and the capital cost for environmental protection measures is proposed as Rs. 22.0 Crores. Proposed employment generation from proposed project will be 250 nos. through direct employment and 400 nos. through indirect employment.
- 28.23.10 It has been reported that there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.
- 28.23.11 Name of the EIA consultant: M/s Pioneer Enviro Consultants Pvt. Ltd. [S.No. 129, List of ACOs with their Certificate / Extension Letter no. Rev. 06, Jan. 15, 2021]
- 28.23.12 Proposed Terms of Reference (Baseline data collection period: Dec'20- Feb'21)

| Attributes | Sampling | | Remarks |
|------------------------------|-----------------|---|--|
| | No. of Stations | Frequency | |
| G. Air | | | |
| c. Meteorological parameters | 1 | On hourly basis for one season | <ul style="list-style-type: none"> • Wind Speed • Wind Direction • Temperature • Relative Humidity • Rainfall |
| d. AAQ parameters | 8 | 24 hourly Twice a week for One Season | Parameters Monitored: PM _{2.5} , PM ₁₀ , SO ₂ , NO _x and CO |
| H. Noise | 8 | On hourly basis for 24 Hrs. at each station | Parameters Monitored: <ul style="list-style-type: none"> • Day equivalent • Night equivalent |
| I. Water | | | |
| c. Ground Water | 8 | One sample at each of the locations | Parameters Monitored: as per IS: 10500 |
| d. Surface Water | 5 | One sample at each of the locations | Parameters Monitored: as per BIS: 2296 |
| J. Land | | | |
| c. Soil quality | 8 | One sample at each of the locations | Parameters Monitored: Texture, infiltration rate, SAR bulk density, pH, Ca, Mg, Na, K, Zn, Mn |
| d. Land use | -- | -- | LU map will be prepared by concerned FAE for study area |

| Attributes | Sampling | | Remarks |
|-------------------------------------|-----------------|----------------|--|
| | No. of Stations | Frequency | |
| K. Biological | -- | Once in Season | --- |
| c. Aquatic | -- | Once in Season | --- |
| d. Terrestrial | -- | Once in Season | --- |
| L. Socio economic parameters | -- | Once in Season | Social Impact Assessment will be carried out by concerned FAE for study area |

Observations of the Committee

28.23.13 The Committee noted the following:

- i. A green field DRI based Steel Plant and Ferro Alloys plant to manufacture long products and Ferro alloys including Pig Iron.
- ii. Area is almost in agricultural land. Although, district road is nearby, National highway is 10km away. Nearby, no industry is visible through OneSource Google earth.
- iii. 1210 KLD water shall be sourced from Seonath River 1.8 km away from the plant.
- iv. Three sites were studied for suitability and Sarda Village was selected on merit.
- v. Air cooled condensers have been proposed to conserve water.

Recommendations of the Committee

28.23.14 In view of the foregoing and 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. No construction activity/infringement will take place in flood plain of saran nallah situated in the vicinity of the project site. The flood plain corresponding to HFL of saran nallah shall be verified and depicted on map by an authority not below the rank of District Magistrate/Executive Engineer of the State Government.
- ii. The PP will raise green belt in 33% of the total project area. This will include 50 m wide green belt along the boundary of the plant situated towards the saran nallah.
- iii. PM levels from stacks shall not exceed 30 mg/Nm³.
- iv. No ground water shall be abstracted.
- v. Air cooled condensers shall be used.
- vi. SAFs shall have 4th hole extraction system for fume pollution control.
- vii. Briquetting and Jigging plant shall be installed in Ferro Alloys Plant.
- viii. Fe-Cr slag shall be subjected to TCLP to finalize if it could be used for construction or should be sent to TSDF.
- ix. 85-90 % rolling shall be done by direct hot charging. Balance 10-15 % may be done through RHF using LDO as fuel.
- x. 100 % Solid waste generated shall recycled/reused or sold.

- xi. 33 % of the plant area shall be covered under green belt. 20 m wide green belt shall be provided towards Andu village.
- xii. EMPs for social and infrastructure development shall be based on the assessment of social needs and the issues raised in public hearing.
- xiii. CEMS shall be provided on all process stacks and the signal shall be received in plant control room for central control of APCDs installed in the plant.
- xiv. All roads in the plant shall be paved and industrial vacuum cleaners shall be used regularly to clean roads to reduce fugitive emissions.
- xv. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.
- xvi. Action plan for rain water harvesting shall be furnished.
- xvii. Detailed traffic study shall be carried out.
- xviii. Ultralow NOx burner with three stage combustion, flue gas recirculation and auto combustion control system shall be used.
- xix. No parking on road side for any vehicle pertaining to the plant. Proper arrangement for vehicle parking within the plant will be made.

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 PM₁₀, PM_{2.5}, SO₂, 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).

The following general points shall be noted:

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

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

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

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 (PM₁₀ 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 PM₁₀ 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(PM₁₀ 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 PM₁₀ to be carried over.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

ADDITIONAL ToRs FOR CEMENT INDUSTRY

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

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

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

ADDITIONAL ToRs FOR LEATHER/SKIN/HIDE PROCESSING INDUSTRY

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

ADDITIONAL ToRs FOR COKE OVEN PLANT

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

ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

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

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

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

Executive Summary

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

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

From: Chhavi Nath Pandey
Sent: 01 February 2021 23:03
To: A K Agrawal; sundar ramanathen
Subject: Re: DRAFT 28 EAC MOM

Dear Mr Agarwal. & Mr. Sundar,
I have gone through the Draft MoM. I am sending the approved Draft as the attached file. Please take further necessary action for putting it on PARIVESH.
Thanking you,
With warm regards,
C. N. Pandey