

F. No. J-11011/112/2013-IA. II(I)  
Government of India  
Ministry of Environment, Forest and Climate Change  
(Impact Assessment Division)

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Dated: 13<sup>th</sup> February, 2020

To

**Shri. Subhasish Das,**  
**Director,**  
M/s. Ardent Steel Limited,  
Village & P.O. – Phuljhar,  
Via Suakati, Keonjhar District  
Odisha – 758085.  
Tel: 06766-258473; E-mail: [narasinghsahoo82@gmail.com](mailto:narasinghsahoo82@gmail.com)

Subject: Enhancement in production capacity of existing pelletizing plant from 6,00,000 TPA to 6,90,000 TPA through process optimization by **M/s. Ardent Steel Ltd** located at Village Phuljhar District Keonjhar, **Odisha – Environmental Clearance under para 7(ii) of the EIA Notification, 2006 - regarding.**

Sir,

1. This refers to the online application of **M/s Ardent Steel Limited** made vide proposal no. IA/OR/IND/124925/2019 dated 15/12/2019 along with Form – 2, updated Form I, pre-feasibility report & addendum to the EIA report and sought for environmental clearance for enhancement in sponge iron production from 0.60 MTPA to 0.69 MTPA under para 7(ii) of EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

2. The aforesaid proposal was considered in the 14<sup>th</sup> meeting of the Reconstituted Expert Appraisal Committee meeting held during 23-24<sup>th</sup> December, 2019. The EAC proceedings of the proposal is given as below:

**Details submitted by the project proponent**

3. M/s. Ardent Steel Limited is operating a 0.6 MTPA Pellet Plant and Coal Gasifier plant of 25800 Nm<sup>3</sup>/hr at Village- Phuljhar, Tehsil- Telkoi, District- Keonjhar, State- Odisha. Environmental Clearance for the existing unit was obtained from MoEF&CC vide letter no. J-11011/112/2013-IA.II (I) dated 29/03/2016.
4. The present proposal of M/s. ASL is for enhancement in production capacity of pelletizing plant from 6,00,000 TPA to 6,90,000 TPA. The pellet plant has 4 nos of filter presses having capacity of (2 nos. x 75 TPH and 2 nos. x 35 T PH) which were already being used for pellet manufacturing. Out of (2 nos. x 35 TPH), one filter press of capacity of 35 TPH will be increased to 75 TPH to achieve the enhancement in pellet production from 0.6 MTPA to 0.69 MTPA. Other sections of the plant will be able to cope up with

*Environmental Clearance for the project titled “Enhancement in production capacity of existing pelletizing plant from 6,00,000 TPA to 6,90,000 TPA through process optimization by M/s. Ardent Steel Ltd located at Village Phuljhar District Keonjhar, Odisha”.*



the expanded capacity due to inherent design margin to the tune of extra 15%. The fuel requirement is met from the producer gas generated in the gasifiers.

5. The certified compliance report for the existing unit was obtained from Regional office, Bhubaneswar vide letter No. 101-884/13/EPE dated 04.10.2019 wherein non-compliances such as installation of online stack monitoring device, third party environmental monitoring, AAQ monitoring, establishment of ETP, display board near the main gate of the company and newspaper advertisement regarding grant of EC have been reported. Subsequently, Project proponent has submitted action taken report for observed non-compliances on 29.10.2019 which was examined and the report was furnished by the Regional Office on 11.11.2019 wherein it is stated that corrective action has been taken by the project proponent to comply to with the observed non-compliances.
6. There is no additional land requirement for the proposed expansion. The raw materials requirement for the proposed pellet plant expansion is given as below:

<b>Raw Materials</b>	<b>Proposed requirement</b>	<b>Size in mm</b>	<b>Source of Raw Materials</b>	<b>Mode of Transport</b>
Iron ore fines	7,15,530	0 – 10	Iron Ore belt of Joda-Barbil, Odisha	Road
Bentonite	4,140	0.074	From local traders of Bhuj, Gujarat product	Rail
Lime Stone/ Dolomite	3,450	0 – 10	Local Market / Sundargarh, Odisha	Road/Rail
Fuel for Gasifier-Coke/Coal fines	35,190	0 – 50	Paradeep	Road/Rail

7. There will be no additional water requirement for the proposed expansion and the ground water consumption will be limited to 500 KLD as at present.
8. Pelletization essentially consists of formation of green balls by rolling fine iron ore (Hematite)/Concentrate with critical amount of water and bentonite as binder. These green balls of nearly 8-16 mm size are then dried, preheated and fired, all under oxidizing conditions, to a temperature of around 1200 - 1250 deg. C. The sensible heat of the exhaust gases is recovered and is fed back in the Indurations operation.
9. The main workshops of pelletizing production line include: concentrate storage, bentonite storage, proportion building, Mixer building, pelletizing, green ball screening & distributing system, traveling grate-rotary kiln-annular cooler system, main I.D. fan system, product storing & transportation system and etc.
10. Baseline Environmental Studies were conducted during winter season from March 1<sup>st</sup> 2018 to 31<sup>st</sup> May 2018. Ambient Air Quality Monitoring (AAQM) was carried out at eight (8) locations during March 2018 to May 2018 and the baseline data indicates the ranges of concentrations as PM<sub>10</sub> – 49.2 to 89.3 µg/m<sup>3</sup>; PM<sub>2.5</sub> – 25.1 to 49.2 µg/m<sup>3</sup>; SO<sub>2</sub> – 5.1 to 9.6 µg/m<sup>3</sup>; NO<sub>2</sub> – 11.3 to 18.2 µg/m<sup>3</sup>. AAQ modeling study emissions indicates that the maximum incremental GLCs after the proposed amendment is 0.76 µg/m<sup>3</sup> with respect to PM<sub>10</sub>.



11. Ground water quality has been monitored at eight locations in the study area and analyzed. pH: 6.6-7.2, Total Hardness: 48-59 mg/l, Chlorides: 30-66 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from 8 locations. Surface water samples were analyzed from 8 locations: pH: 7.2-7.6, Total Hardness: 64-71 mg/l. Heavy metals are within the limits.
12. The solid waste generation will marginally increase as the plant production increases by 15%. The solid waste generated from the furnace includes Dust generated from ESP of Pellet Plant, Dust generated from de-dusting units installed before various stacks, Coal ash generated from the gasification section and broken green pellets. All the said solid wastes except coal ash shall be recycled back to the feed system of the pellet plant. Coal ash will be utilized for cement making, brick making, low /waste land reclamation, etc.
13. The expansion project will not have any addition of capital cost as the proposal does not involve any additional infrastructure.
14. The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
15. Name of the Consultant: - M/s Centre for Envotech & Management Consultancy Pvt. Ltd. (Sl. No. 24, List of QCI Accredited Consultant Organizations (Alphabetically) Rev. 82, Dec. 05, 2019)

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

16. The Committee noted that as per the findings of the EIA report, there is no change in land and water requirement. The Committee considered the instant proposal under para 7(ii) (a) of the EIA Notification, 2006 and dispense with the requirement of conducting fresh public consultation.

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

17. In view of the foregoing and after detailed deliberations, the committee recommended the project for grant of Environmental Clearance under para 7(ii) of EIA Notification, 2006 subject to the following specific conditions in addition to the applicable general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to pellet plants.
  - i. Ground water extraction shall be limited to 500 KLD as at present. No additional ground water extraction is permitted.
  - ii. No slime pond is permitted.
  - iii. Green belt shall be developed covering 33% of the area in a time frame of two years.
  - iv. Provision for industrial vacuum cleaner to control the fugitive emissions shall be made.
  - v. Particulate emissions from the stacks shall be less than 30 mg/Nm<sup>3</sup> with bag house as APCD. Emission from ESP shall be less than 50 mg/Nm<sup>3</sup>.



### **Decision of MoEF&CC**

18. The Ministry of Environment, Forest and Climate Change (MoEF&CC) has considered the application based on the recommendations of the Expert Appraisal Committee (Industry-I) and hereby decided to accord environmental clearance for project cited above under para 7(ii) of the EIA Notification, 2006 subject to the following specific and applicable general conditions prescribed in the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to Pellet Plants.

#### **A. Specific Conditions**

- i. Ground water extraction shall be limited to 500 KLD as at present. No additional ground water extraction is permitted.
- ii. No slime pond is permitted.
- iii. Green belt shall be developed covering 33% of the area in a time frame of two years.
- iv. Provision for industrial vacuum cleaner to control the fugitive emissions shall be made.
- v. Particulate emissions from the stacks shall be less than 30 mg/Nm<sup>3</sup> with bag house as APCD. Emission from ESP shall be less than 50 mg/Nm<sup>3</sup>.

#### **B. General conditions**

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

- i. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/Committee.
- ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

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

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31<sup>st</sup> March 2012 (applicable to pellet plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. The project proponent shall install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released



(e.g. PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.

- iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources.
- vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
- vii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- viii. 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.
- ix. Use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
- x. Provide covered sheds for raw materials like scrap and sponge iron, lump ore, coke, coal, etc.
- xi. Provide primary and secondary fume extraction system at all melting furnaces.
- xii. Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

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

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31<sup>st</sup> March 2012 (applicable to pellet plants) as amended from time to time 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. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- 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. The project proponent shall practice rainwater harvesting to maximum possible extent.
- 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.

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

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

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

- i. The project proponent shall 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.
- ii. Provide the project proponent for LED lights in their offices and residential areas

#### **VI. Waste management**

- i. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.

#### **VII. Green Belt**

- i. 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
- 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. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

### **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 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- 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.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- vi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the pellet plants shall be implemented.




## **X. Miscellaneous**

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the 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 authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. 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.
- x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.




- xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xv. 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, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xvi. 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.
19. The project proponent shall obtain fresh environmental clearance in case of change in scope of the project if any.
20. This issues with the approval of Competent Authority.

Yours faithfully,

  
(A.K. Agrawal)  
Director

Copy to: -

1. Secretary, Department of Forests, Government of Odisha, Secretariat, Bhubaneswar.
2. Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
3. Deputy Director General (Central), Ministry of Environment, Forest and Climate Change, Regional Office (EZ), A/3, Chandersekharpur, Bhubaneswar – 751023.
4. Chairman, Odisha State Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneshwar-751012.
5. Member Secretary, Central Ground Water Authority, West Block –II, Wing -3, Sector I, R.K.Puram, New Delhi – 110086.
6. District Collector, Keonjhar District, Odisha.
7. Guard File/Record File/Monitoring File.
8. MoEF&CC website.

  
(A.K. Agrawal)  
Director