

F. No. J-11011/310/2009- IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

Paryavaran Bhawan
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New Delhi – 110 003

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Dated 28th January, 2010

To,

✓ The Managing Director
M/s Bihar Foundry and Casting Ltd.
Main Road, Ranchi - 834 001
Jharkhand

E-mail : consafescience@gmail.com / bfclgfa@gmail.com ; Fax No. : 0651-2202799 ;

Subject : Expansion of Steel Plant [Sponge Iron Plant 99,000 TPA; Ingots/billets 75,000 TPA; MS Structures/Bars 49,500 and Captive Power Plant 10 MW] at Plot No. 1364, Ramgarh Industrial Area, Village Marar, District Hazaribagh, Jharkhand by M/s Bihar Foundry and Casting Ltd. – Environment clearance reg.

Ref. : Your letter no. 2009-10/139 dated 14th August, 2009.

Sir,

This has reference to your letter no. 2009-10/139 dated 14th August, 2009 alongwith Form I, Pre-feasibility Report, draft Terms of References, EIA/EMP report and subsequent communications vide letter dated 14th November, 2009 for environmental clearance on the above mentioned project.

2.0 The Ministry of Environment and Forests has examined the application. It is noted that proposal is for the expansion of Steel Plant (Sponge Iron Plant 99,000 TPA; Ingots/billets 75,000 TPA; MS Structures/Bars 49,500 and Captive Power Plant 10 MW) at Plot No. 1364, Ramgarh Industrial Area, Village Marar, District Hazaribagh, Jharkhand by M/s Bihar Foundry and Casting Ltd. Total land acquired for the proposed project is 14 acres. A copy of the Special Gazette No. 52(a) dated 27th March, 1974 regarding notified Ramgarh industrial area is submitted. Proposed expansion will be taken up within the existing plant premises. No rehabilitation and resettlement (R & R) is involved. No national Park/wild life sanctuary/reserve forest is located within 10 km radius of the project site. Total cost of the project is Rs. 74.00 Crores. Following are the details of existing and proposed facilities:

S. N.	Details	Capacity (TPA)	
		Existing	Proposed
1	Sponge Iron Plant (3x100 TPD)	--	99,000
2	Induction Furnace	33,660 (1x6 TPC & 2x3 TPC)	75,000 (1x10 TPH)
3	Rolling Mill	16,500 (50 TPD)	49,500 (150 TPD)
4	Captive Thermal Power Plant WHRB AFBC	--	10 MW 6 MW (3x11 TPH) 4 MW (1x 25 TPH)

3.0 Sponge iron will be manufactured in rotary kiln. Sponge Iron, scrap, fluxes and ferro alloys will be charged in the induction furnace to manufacture molten metal which will be subsequently refined in a ladle refining furnace and transported to the continuous casting machine to cast the molten steel into billets. The billets will be fed into a preheating furnace and passed through the rolls of rolling mill to achieve finished products. The captive power plants viz. waste heat recovery boiler (WHRB) will be based on the waste heat of the flue gases from the plant while AFBC will be based on the char from DRI and coal.

4.0 Electrostatic precipitator (ESP), dust settling chamber (DSC), after burning chamber (ABC), gas conditioning tower (GCT), bag filters, dust extraction and dust suppression system will be provided to control emissions. Total ground water requirement will be 300 m³/day. All the wastewater will be treated and used for ash conditioning, slag cooling / green belt development. No liquid effluent will be discharged outside the plant. Char from DRI kiln will be used as fuel in AFBC boiler. Iron ore fines will be reused in the process and also sold to cement industries. Dust from coal crushing and screening bag filters will be reused in rotary kiln. Dust collected from rotary kiln will be sold to mini cement plants. Wet scrapper sludge will be given to brick manufacturers. Kiln accretion and slag from induction furnace will be used properly. Fly ash will be disposed off to brick manufacturing plants/cement plants. Mill scales from re-rolling mill will be used in induction furnace.

5.0 No public hearing/consultation is required as per Section (iii), Stage (3), Para (i)(b) of EIA Notification 2006.

6.0 Public Hearing / Public Consultation meeting was held on 30th July, 2009.

7.0. The Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14th September, 2006 subject to strict compliance of the following specific and general conditions:

A. SPECIFIC CONDITIONS :

- i) Compliance to all the specific and general conditions stipulated for the existing plant by the Central/State Govt. shall be ensured and regular reports submitted to the Ministry and its Regional Office at Bhubaneswar.
- ii) Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. Continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP) and bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm³. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.
- iii) Electrostatic precipitator (ESP) shall be provided to DRI kilns, AFBC boiler and waste heat recovery boiler (WHRB) to control gaseous emissions within 100 mg/Nm³. Hot gases from DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in waste heat recovery boiler (WHRB). The gas then shall be cleaned in ESP before leaving out into the atmosphere through ID fan and stack of adequate height. Fume extraction system with bag filters shall be provided to induction furnace and ladle furnace and the cleaned gases shall be passed through a stack of adequate

height. Wet scrubber and stack of adequate height shall be provided to rolling mill. Data on ambient air quality, stack emissions and fugitive emissions shall regularly submitted to the Ministry's Regional Office at Bhubaneswar, Jharkhand Pollution Control Board (JPCB) and Central Pollution Control Board (CPCB) once in six months.

- iv) The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- v) In-plant control measures for checking fugitive emissions from all the vulnerable sources including Bag filters shall be provided at coal and iron ore screen and crusher house, product house, cooler discharge, intermediate bins, coal injection points of DRI plant. Dust extraction system with bag filters shall be provided to crusher house, screens, transferring chutes, junction towers and feed points below reclaim hoppers. Dust suppression system with sprinklers shall be provided at raw material stock piles (coal, iron ore etc.) to control fugitive dust emissions. Further, specific measures like asphaltting of the roads within premises shall be carried out to control fugitive emissions. Fugitive emissions shall be controlled, regularly monitored and records maintained.
- vi) 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. New standards issued by the Ministry for the sponge iron plant in May, 2008 shall be followed.
- vii) Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.
- viii) Total ground water requirement shall not exceed 300 m³/day and prior 'Permission' for the drawl of 300 m³/day ground water from the central Ground Water Authority / State Ground Water Board (CGWA/SGWB) shall be obtained. All the effluent from effluent treatment plant shall be neutralized in a neutralization pit and used for gardening and washing. All the acidic and alkaline regeneration wastewater from the demineralization (DM) plant, cooling tower blow down, boiler blow down and wastewater from rolling mill shall be mixed in a central monitoring basin (CMB), neutralized and after settling in settling tank shall be used for ash conditioning, slag cooling / green belt development. Runoff from the coal storage yard shall be discharged to the sump and sludge shall be disposed off in environment-friendly manner.
- ix) Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- x) 'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises. Domestic wastewater shall be treated in septic tanks followed by soak pit and used for green belt development.
- xi) The water consumption shall not exceed 16 m³/Ton of Steel as per prescribed standard. ✓

- xii) Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, Jharkhand SPCB and CPCB.
- xiii) All the char from DRI plant shall be utilized in AFBC boiler of power plant and no char shall be disposed off anywhere else. AFBC boiler shall be installed simultaneously alongwith the DRI plant to ensure full utilization of char from the beginning. Dust collected from coal crushing and screening bag filter shall be reused in rotary kiln. All the SMS slag, kiln accretions etc. shall also be properly utilized. Mill scales from re-rolling mill shall be used in induction furnace. Dust collected from rotary kiln shall be sold to mini cement plants. Wet scrapper sludge shall be given to brick manufacturers. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner. Oily waste and spent oil shall be provided to authorized recyclers/reprocessors.
- xiv) All the slag from induction furnace shall be used for land filling inside the plant or used as building material only after passing through Toxic Chemical Leachability Potential (TCLP) test. Toxic slag shall be disposed in secured landfill as per CPCB guidelines. Otherwise, hazardous substances shall be recovered from the slag and output waste and be disposed in secured landfill as per CPCB guidelines.
- xv) Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Bhubaneswar, Jharkhand SPCB and CPCB.
- xvi) A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
- xvii) Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003. All the fly ash shall be provided to cement and brick manufacturers for further utilization and 'Memorandum of Understanding' shall be submitted to the Ministry's Regional Office at Bhubaneswar.
- xviii) A Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, Jharkhand SPCB and CPCB within 3 months of issue of environment clearance letter.
- xix) As proposed, green belt shall be developed in 4.7 acres (33 %), out of total 14 acres land within and around the plant premises as per the CPCB guidelines in consultation with DFO.
- xx) All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.
- xxi) The company shall provide housing for 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.

B. GENERAL CONDITIONS:

- i. The project authorities must strictly adhere to the stipulations made by the Jharkhand Pollution Control Board (JPCB) and the State Government.
- ii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.
- iii. The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19th May, 1993 and 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. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.
- iv. At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO₂ and NO_x are anticipated in consultation with the Jharkhand SPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the Jharkhand PCB / CPCB once in six months.
- v. 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.
- vi. 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 (nighttime).
- vii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- viii. The company shall develop surface as well as ground water harvesting structures to harvest the rainwater for utilization in the lean season besides recharging the ground water table.
- ix. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.
- x. As proposed, Rs. 4.00 Crores and Rs. 0.40 Crores shall be earmarked towards total capital cost and recurring cost/annum for the environmental pollution control measures and judiciously utilized to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.

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- xii. A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / 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.
- xiii. 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 MOEF, the respective Zonal Office of CPCB and the JPCB. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- xiv. 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 MOEF, the respective Zonal Office of CPCB and the JPCB. The Regional Office of this Ministry / CPCB / JPCB shall monitor the stipulated conditions.
- xv. The environmental statement for each financial year ending 31st 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 alongwith the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.
- xvi. 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 and Forests 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.
- xvii. 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.

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

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

10.0. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.

11.0. 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 Wastes (Management and Handling) Rules, 2003 and the Public (Insurance) Liability Act, 1991 alongwith their amendments and rules


(Dr. P. B. Rastogi)
Director

Copy to :

1. The Secretary, Department of Environment, Govt. of Jharkhand, Jharkhand.
2. Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
3. Chairman, Jharkhand Pollution Control Board, Jharkhand, Town Administrative Building, H.E.C., Dhruwa, Raanchi - 824004, Jharkhand.
4. The Chief Conservator of Forests (Eastern), Regional Office (EZ), A/3, Chandrasekharpur, Bhubaneswar - 751 023, Orissa.
5. Adviser (IA-II), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
7. Monitoring Cell
8. Guard File.
9. Record File.


(Dr. P. B. Rastogi)
Director

28/1/10