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F. No. J-11011/1040/2007- IA II (I)

Government of India  
Ministry of Environment and Forests  
(I.A. Division)

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5 JAN 2010

Paryavaran Bhawan  
CGO Complex, Lodhi Road  
New Delhi - 110 003

E-mail : [pb.rastogi@nic.in](mailto:pb.rastogi@nic.in)  
Telefax : 011: 2436 7668  
Dated 27<sup>th</sup> January, 2010

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15/2/2010

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To,

M/s Raigarh Ispat & Power (P) Ltd.  
'Madhuvan', Behind Balram Garage  
Kotra Road, Raigarh, Chhattisgarh

E-mail : [raigarhispat@rediffmail.com](mailto:raigarhispat@rediffmail.com) / [hotelmetrocity@yahoo.com](mailto:hotelmetrocity@yahoo.com) ;  
Fax No.: 07762-225955 ;

**Subject :** Expansion of Sponge Iron Plant (2x100 TPD) to Integrated Steel Plant [Sponge Iron Plant (2x100 TPD), Steel Melting Shop (Billets, 300 TPD), Rolling Mill (TMT Bars, 300 TPD), Ferro Alloy Plant (100 TPD), Coal Washery (1.0 MTPA)] and Captive Power Plant (WHRB, 8 MW; FBC, 46 MW) at Village Delari, Tehsil Raigarh, District Raigarh, Chhattisgarh M/s Raigarh Ispat & Power (P) Ltd. - Environment clearance reg.

**Ref. :** Your letters no. nil dated 10<sup>th</sup> September, 2009.

Sir,

This has reference to your letter no. nil 10<sup>th</sup> September, 2009 alongwith Form I, Pre-feasibility Report, EIA/EMP and related project documents and subsequent communication vide your letter dated 12<sup>th</sup> October, 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 Sponge Iron Plant (2x100 TPD) to Integrated Steel Plant [Sponge Iron Plant (2x100 TPD), Steel Melting Shop (Billets, 300 TPD), Rolling Mill (TMT Bars, 300 TPD), Ferro Alloy Plant (100 TPD), Coal Washery (1.0 MTPA)] and Captive Power Plant (WHRB, 8 MW; FBC, 46 MW) at Village Delari, Tehsil Raigarh, District Raigarh, Chhattisgarh M/s Raigarh Ispat & Power (P) Ltd. Total land acquired is 56.15 acres. Taraimal RF (2.0 km, N), Rabo RF (3.7 km, W), Urdana RF (1.3 km, S), Barkacchar RF (7.8 km SE), Kharjdungri PF (8 km, SE) and Lakho PF (7.2 km, SE) are located within 10 km radius of the proposed site. Total cost of the project is Rs. 270.00 Crores. Sponge iron plant (2x100 TPD; 60,000 TPA) exists. Following are the details of products from existing and proposed facilities:

S.N.	Products	Existing	Expansion	After expansion
1	Sponge iron	60,000 TPA (2X100 TPD)	60,000 TPA (2X100 TPD)	1,20,000 TPA
2	MS Billets	--	90,000 TPA (3x10 TPH IF)	90,000 TPA
3	TMT Bars	--	90,000 TPA (1X300 TPD)	90,000 TPA
4	Ferro alloys	--	30,000 TPA (2x9 MVA)	30,000 TPA
5	Washed coal	--	1.0 MTPA	1.0 MTPA
6	Power	--	54 MW	54 MW
	WHRB	--	8 MW (4x2 MW)	
	AFBC	--	46 MW	

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Following will be the final configuration of the facilities and products to be manufactured:

S. N	Details	Proposed Plant Configuration	Proposed Annual Production Capacity
1	Manufacturing of Sponge Iron plant	2x100 TPD	60,000 TPA
2	Manufacturing of Steel Ingots / Billets through Induction Furnace	3x10 MT / Heat	90,000 TPA
3	Manufacturing of Rolled Products (Structural Items) through Automatic Rolling Mill	1x300 TPD	90,000 TPA
4	Manufacturing of Ferro Alloys	2x9 MVA	30,000 TPA
5	Power Plant (WHRB based)	2x4 MW	8 MW
6	Power Plant (FBC based)	1x16 MW	16 MW
		1x30 MW	30 MW
7	Coal washery plant	1 Million TPA	1 Million TPA

3.0 Sponge Iron will be manufactured in a rotary kiln. Sponge manufactured will be melted in IF with scrap to produce M.S. Billets/Ingots, which will be fed to rolling mill to produce rolled products. Ferro alloys will be produced in a submerged electric arc furnace. Dry type technology will be adopted in the coal washery.

4.0 Electrostatic precipitator (ESP), dust settling chamber, after burning chamber, bag filters, dust suppression, fume extraction, water sprinklers and stack of adequate height will be provided to control emissions within permissible limits. Total water requirement from ground water sources will be 415 m<sup>3</sup>/day and permission is obtained from Central Ground Water Authority vide letter dated 28<sup>th</sup> October, 2009. All the treated wastewater will be used as make up water for cooling and remaining for ash conditioning, dust suppression and green belt development. No effluent will be discharged outside the premises and 'zero' discharge will be adopted. Dolochar will be used in AFBC boiler as fuel. Ash from CPP and bag filter (dust) will be used for brick making and cement manufacturing. Wet scrapper sludge will be given to brick manufacturers. SMS slag after metal recovery, accretion slag and Silico-Manganese slag will be suitably used. Ferro-Silicon slag will be used in cast iron foundries. Ferro-manganese slag will be used in manufacture of Silico manganese. Mill scales from rolling mill will be reused in induction furnace. Coal washery rejects will be used in captive power plant. Green belt will be developed in 33% area.

5.0 Public hearing/Public consultation meeting was held on 21<sup>st</sup> June, 2009.

6.0 The Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14<sup>th</sup> September, 2006 as amended subsequently subject to strict compliance of the following specific and general conditions:

**A. SPECIFIC CONDITIONS :**

- i) Environment clearance is subject to the final order of the Hon'ble Court of Chhattisgarh in reference to Writ Petition (Civil) 2662/2209 dated 19<sup>th</sup> May, 2009 in pending, as may be applicable to this project.
- ii) 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 Bhopal.
- iii) 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), bag filters and stacks of adequate height etc. shall be provided to keep the emission levels below 50 mg/Nm<sup>3</sup> and installing energy efficient technology. ✓

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) 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.
- v) Electrostatic precipitator (ESP) shall be provided to WHRB and FBC boiler power plant to control the particulate emissions below  $50 \text{ mg/Nm}^3$  and cleaned gases shall be let out to atmosphere through a stack of adequate height. Fume extractions system with bag filters shall be provided to control fugitive emissions from SMS and ferro alloys unit. Flue gases from rolling mill shall be let out through a stack of adequate height. The SPM levels from all the sources shall be controlled within  $50 \text{ mg/Nm}^3$  as proposed.
- vi) The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 shall be followed.
- vii) In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Dust suppression system with water sprinklers shall be provided at raw material handling, unloading and storage areas. Dust extraction system with bag filters shall be provided at kiln inlet and outlet, material transfer points, coal crushing and screening areas, intermediate bin, stock house, cooler discharge and product separation areas. Water sprinklers shall be provided for dust suppression during unloading of raw materials. Water spraying shall also be done to prevent the dust emanation due to vehicular movement. All the roads in the work area shall be asphalted. Monitoring of fugitive emissions in the work zone environment shall be carried out regularly as per the CPCB guidelines and reports submitted to CECB / CPCB and Ministry's Regional Office at Bhopal.
- viii) 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 for the sponge iron plant issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008 shall be followed.
- ix) 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. Water sprinkling system shall be installed to control fugitive emissions from vehicular movement. Vehicular emissions shall be regularly monitored.
- x) Total ground water requirement from bore wells shall not exceed  $415 \text{ m}^3/\text{day}$  as per the permission accorded by the Central Ground Water Authority vide letter dated 28<sup>th</sup> October, 2009. Closed circuit cooling system shall be adopted and no effluent shall be generated from the DRI plant, SMS and Rolling Mill. Acidic and alkaline effluent from DM plant alongwith boiler blow down shall be neutralized in a neutralization tank, mixed with cooling tower blow down in a Central Monitoring Basin (CMB) and shall be recycled into DRI plant and rolling mill as make up water for cooling and remaining will be used for ash conditioning, dust suppression and green belt development and various other project related activities after passing through an oil separator to remove the oil content in the effluent. Domestic effluents shall be treated in septic tank followed by a soak pit and used as manure for green belt development.

- xi) Air cooled condensers and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly.
- xii) 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.
- xiii) 'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.
- xiv) The water consumption shall not exceed 16 m<sup>3</sup>/Ton of Steel as per prescribed standard.
- xv) 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 Bhopal, Maharashtra SPCB and CPCB.
- xvi) All the char from DRI plant and coal washery rejects 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. Mill scales shall be recycled induction furnace. SMS slag after metal recovery and accretion slag shall also be properly utilized. Wet scrapper sludge shall be given to brick manufacturers. Ferro-Silicon slag shall be used in cast iron foundries. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner. Used oil, oily waste, spent lubricants and lead acid batteries shall be provided to authorized recyclers/reprocessors.
- xvii) All the SMS and ferro alloy slag 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.
- xviii) Slag produced in Ferro Manganese (Fe-Mn) production shall be used in manufacture Silico Manganese (Si-Mn).
- xix) A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
- xx) 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 Bhopal, MPPCB and CPCB.
- xxi) 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 Bhopal within 3 months of issue of this letter. ✓

- v. Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May, 1993 and 31<sup>st</sup> 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 water harvesting structures to harvest the rain water 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. 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.
- x. As proposed, Rs. 11.50 Crores and Rs. 0.75 Crores 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 and Forests 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 Bhopal. The funds so provided should not be diverted for any other purpose.
- xi. 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.
- xii. 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 CECB. The criteria pollutant levels namely; SPM, RSPM, SO<sub>2</sub>, NO<sub>x</sub> (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.
- xiii. 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 at Bhopal, the respective Zonal Office of CPCB and the CECB. The Regional Office of this Ministry at Bhopal / CPCB / CECB shall monitor the stipulated conditions.
- xiv. The environmental statement for each financial year ending 31<sup>st</sup> 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.

- xv. 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 CECB 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.
- xvi. 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.

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

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

9.0 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.

10.0 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 along with their amendments and rules

  
(Dr. P. B. Rastogi)  
Director

Copy to:

1. The Secretary, Department of Environment, Govt. of Chhattisgarh, Chhattisgarh.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
3. The Chairman, Chhattisgarh Environment Conservation Board, Nanak Niwas, Civil Lines, Raipur, Chhattisgarh.
4. The Chief Conservator of Forests (Eastern), Regional Office (Western Zone), E-3/240, Arera Colony, Bhopal - 462 016, M.P.
5. Adviser (IA-II), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Monitoring Cell, Ministry of Environment & Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
7. Guard file.
8. Record file.

  
(Dr. P. B. Rastogi)  
Director