F. No. J-11011/40/2009- IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

Paryavaran Bhawan
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Dated 2nd April, 2010

To,

The Director
M/s Bhushan Power & Steel Ltd.
15-17, Tolstoy Marg, 4th Floor, Tolstoy House
Connaught Place, New Delhi – 110001

E-mail : scwahiebhushan@yahoo.co.in / bhushanorissa@yahoo.com ;
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Subject : **Expansion of Steel Plant (2.2 to 2.8 MTPA) at P.O. Lapanga, Village Thelkoloi, Tehsil Rengali, District Sambalpur, Orissa by M/s Bhushan Power & Steel Ltd. – Environmental Clearance reg.**

Ref. : **Your letter no. nil dated 7th April, 2009.**

Sir,

This has reference to your letter no. no. nil dated 7th April, 2009 alongwith Application in Form I, Pre-feasibility Report, draft 'Terms of References' and EIA/EMP report as per the EIA Notification, 2006 and related project documents and subsequent clarification furnished by you vide your letters dated 5th May, 2009, 26th June, 2009 and 16th March, 2010 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 (2.2 to 2.8 MTPA) at P.O. Lapanga, Village Thelkoloi, Tehsil Rengali, District Sambalpur, Orissa by M/s Bhushan Power & Steel Ltd. Environment clearance for the existing steel plant (2.2 MTPA) is accorded vide letter no. J-11011/372/2006-IA(II)(I) dated 29th March, 2007. Expansion will be carried out within existing premises of 1,300 acres. Rehabilitation and resettlement is already implemented as per the policy of the Government of Orissa. Total cost of the project is Rs. 1,500.00 Crores. Following are the details of existing and proposed facilities:

S.N.	Facility	EC granted for 2.2 MTPA	Units proposed for 0.6 MTPA
1	Coal Washery	4.5 MTPA	--
2	Ore Beneficiation plant	--	1200 TPH
3	Pellet Plant	2.0 MTPA	1.5 MTPA
4	DR Kiln	10x500 TPD	4x500 TPD
5	Sinter Plant	1x105 m^2	1x60 m^2
6	Coke oven battery	2x0.45 MTPA (Non-recovery)	0.70 MTPA (with limited recovery)
7	Blast Furnace with SGP	1x1008 m^3	1x550 m^3

E-mail on 2/4/10.

8	Steel making and casting unit	4x90 T EAF, 4x90 TLF, 4x15 T IF 4x16 MVA alloy smelter 1x2+1x4-strand billet caster 2x1-single strand thin slab caster	2x100 t EAF 2x100 t LF 1x5-strand billet caster
9	CSP Plant (HRM)	1.8 MTPA	--
10	Wire Drawing Unit	--	0.45 MTPA
11	Bar & Rod Mill	0.1 MTPA	0.45 MTPA
12	Pipe and Tube mill	--	0.20 MTPA
13	Cold Rolling Mill	--	1.0 MTPA
14	Galvanizing/Galvolume unit	--	0.5 MTPA
15	Colour Coating Unit	--	0.45 MTPA

16	Oxygen Plant	1x400 TPD	1x600/660 TPD
17	Lime plant	2x300 TPD	1x300 TPD
18	Dolo plant	1x300 TPD	1x100 TPD
19	Captive Power Plant	430 MW (AFBC+WHRB+CFBC)	130 MW (WHRB+CFBC)
20	Slag Cement Plant	--	1.0 MTPA

3.0 DRI-BF-EAF-CC Route alongwith Coke oven, Sinter Plant & Captive Power Plant will be installed. Mini cement plant is also proposed to use the BF slag. Cement plant for making use of fly ash as well as slag to manufacture Pozollona Portland Cement (PPC) and Portland Slag Cement (PSC) will also be installed. Beneficiation plant will be operated on Jigging technique.

4.0 Electrostatic precipitator (ESP), gas cleaning plant, cyclone, multi-cyclone, wet scrubber, bag house, bag filters, fume extraction and dust suppression system etc. to control emissions within 50 mg/Nm^3 limits. Total water requirement from Hirakund Dam will be 5,500 m^3/hr and permission is accorded by the Water Resource Department, Govt. of Orissa vide letter dated 17th June, 2003. Modified wet quenching system will be provided to coke oven plant. The wastewater will be treated in BOD & ETP plant and used in the process and /or for ash handling, dust suppression, slag granulation and green belt development. No effluent will be discharged and 'zero' discharge will be adopted. Iron ore fines, process dust, CSP and bar mill scales will be used in sinter plant. Coal fines, char and washery rejects will be used in CPP. All the fly ash and BF slag will be used in manufacturing Pozollona Portland Cement (PPC) and Portland Slag Cement (PSC). Sludge and EAF slag will be recycled in sinter plant. Scrap and SMS slag will be reused in SMS. Green belt will be developed in 430 acres (33 %) out of total 1300 acres.

5.0 Public hearing is exempted as per section 7(ii) of EIA Notification, 2009.

6.0. 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 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. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided alongwith the sufficient air pollution control devices viz. Electrostatic precipitator (ESP), gas cleaning plant, cyclone, multi-cyclone, wet scrubber, bag house, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm^3 by 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.

iii) As proposed, electrostatic precipitator (ESP) shall be provided to sinter plant, WHRB, CFBC, DRI and slag cement plants; bag house to blast furnace and ESP & bag filters to by-product recovery type of coke oven to control SPM levels within 50 mg/Nm^3. Fume extraction system with bag filters shall be provided to electric arc furnace and ladle furnace.

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) All the standards prescribed for the coke oven plants shall be followed as per the latest guidelines. Naphthalene scrubbing unit shall be provided to remove residual naphthalene from coke oven gas. Ammonia released in de-sulphurization section of coke oven plant shall be catalytically cracked to Nitrogen and Hydrogen. BF top gas shall be cleaned in dust catcher and gas cleaning plant (GCP) comprising of bag filters and used in furnace of CSP, BF, EAF, sinter plant, lime & dolo plant. Bag filters with adequate stack height shall be provided to lime and dolo plant. Proper and full utilization of coke oven gases in power plant using heat recovery steam generators shall be ensured and no flue gases shall be discharged into the air.

vi) 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.

vii) All the standards prescribed for the coke oven plants shall be followed as per the latest guidelines. Proper and full utilization of coke oven gases in power plant using heat recovery steam generators shall be ensured and no flue gases shall be discharged into the air.

viii) In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Bag filters shall be provided at coal mill, intermediate bin / separation building, product storage silo, day bin, iron ore circuit, load out, cooler discharge to control fugitive dust emission. Dust suppression system with water sprinklers shall be provided at raw material stock piles and loading/unloading points. Dust extraction system with bag filters shall be provided at all raw material transfer points, crusher house, junction towers and feed points. All conveyors shall be completely covered by GI sheets. All the roads shall be asphalted to control dust emissions.

ix) 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 th... CPCB shall be followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 shall be followed.

x) 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.

xi) Total water requirement from Hirakund Dam shall not exceed 5,500 m^3/hr although 'Permission' for the drawl of 10,194 m^3/hr water is accorded by the Water Resource Department, Govt. of Orissa vide letter dated 17th June, 2003. Efforts shall further be made to use maximum water from the rain water harvesting sources. As proposed, modified wet quenching system shall be provided to coke oven plant. Air cooled condensers and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent shall be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Sanitary sewage shall be treated in septic tank followed by soak pit and used for green belt development.

xii) Effluent treatment plant (ETP) shall be provided for the treatment of Phenolic effluent from coke oven plant and the treated water shall be used for sprinkling at coal stockyard. Clarifier, sludge pond and filter press shall be provided in raw water treatment plant. DM plant water shall be neutralized in neutralization pit and the treated water shall be used for ash handling. Process wastewater shall be recycled / reused in the plant. Cooling tower blow down shall be reused in the plant for dust suppression and slag granulation, pig casting machine etc. Provision of separate drains for the process and storm water shall be kept.

xiii) All the wastewater from the coke oven plant containing cyanide, phenol and COD etc. shall be properly treated in the BOD plant. Continuous monitoring of Total Organic Compounds (TOC) including cyanide, phenol and COD etc. shall be done at the outlet of ETP (BOD plant) and recovery of products like tar, ammonia, naphthalene etc. shall be ensured.

xiv) 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.

xv) 'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.

xvi) The water consumption shall not exceed 16 m^3/Ton of Steel as per prescribed standard.

xvii) 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, OPCB and CPCB.

xviii) Iron ore fines, process dust, and mill scales shall be recycled to sinter plant to produce sinter. Sludge and slag from electric arc furnace (EAF) shall also be recycled in the sinter plant. Scrap shall be reused in the steel melting shop (SMS).

xix) All the coal fines, char from DRI plant and washery rejects shall be utilized in AFBC boiler of power plant and no char shall be used for briquette making or disposed off anywhere else. AFBC boiler shall be installed simultaneously alongwith the DRI plant to ensure full utilization of char from the beginning. All the blast furnace (BF) slag shall be granulated and used in manufacturing Portland Slag Cement (PSC) in the proposed cement plant. Scrap shall be used in steel melting shop (SMS). EAF & SMS slag and kiln accretions shall be properly utilized. All the other solid waste including broken refractory mass and kiln accretions shall be properly disposed off in environment-friendly manner. Tar sludge from coke oven decanter, waste oil and oil sludge shall be properly disposed as per Hazardous Waste (Management & Handling) Rules, 1989 as subsequently amended.

xx) All the 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.

xxi) Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 & 2010. All the fly ash and BF slag shall be fully utilized in manufacturing of Pozollona Portland Cement (PPC) and Pozollona Slag Cement (PSC).

xxii) 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, OPCB and CPCB.

xxiii) A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.

xxiv) A Risk and Disaster Management Plan alongwith the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhubaneswar, OPCB and CPCB within 3 months of issue of environment clearance letter.

xxv) As proposed, green belt shall be developed in 430 acres (33 %) out of total 1300 acres in and around the plant as per the CPCB guidelines in consultation with DFO.

xxvi) All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.

xxvii) Rehabilitation and Resettlement Plan for the project affected population including tribals shall be implemented as per the policy of the State Govt. in consultation with the State Govt. of Orissa. Compensation paid in any case shall not be less than the norms prescribed under the National Resettlement and Rehabilitation Policy, 2007.

xxviii) At least 5 % of the total cost of the project shall be earmarked towards the corporate social responsibility and item-wise details alongwith time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured accordingly in a time bound manner.

xxix) 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.

B. GENERAL CONDITIONS:

i. The project authorities must strictly adhere to the stipulations made by the Orissa Pollution Control Board (OPCB) 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 Orissa Pollution Control Board (OPCB) may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.

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, SO_2 and NO_x are anticipated in consultation with the OPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and OPCB, CPCB once in six months.

v. In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Further, specific measures like water sprinkling around

the coal stockpiles and asphalting or concreting of the roads shall be done to control fugitive emissions.

vi. 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 form time to time. The treated wastewater shall be utilized for plantation purpose.

vii. 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 shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

viii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

ix. 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.

x. 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. Suggestions made during the public hearing shall be impiemented.

xi. As proposed, Rs. 130.00 Crores and Rs. 14.00 Crores shall be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures. All the funds allocated shall be 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.

xii. The Regional Office of this Ministry at Bhubaneswar / CPCB / OPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data alongwith statistical interpretation shall be submitted to them regularly.

xiii. 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 OPCB 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 shall be forwarded to the Regional office at Bhubaneswar.

xiv. 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.

xv. 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 OPCB. The criteria pollutant levels namely; SPM, RSPM, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters like total Organic Compounds (TOC) including cyanide, phenol and COD etc. indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

xvi. 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 respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.

xvii. 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.

xviii. 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 Orissa, Bhubaneswar, Orissa.
2. Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi – 110 032.
3. Chairman, Orissa Pollution Control Board, Parivesh Bhavan, A/118, Nikanthhanagar, Unit-8, Bhuvaneswar - 751 012, Orissa.
4. The Chief Conservator of Forests (Eastern), Regional Office (EZ), A/3, Chandrasekharpur, Bhuvaneswar - 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