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F. No. J-11011/868/2008-IA-II (I)  
**Government of India**  
**Ministry of Environment and Forests**  
**(I.A. Division)**

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Dated 26<sup>th</sup> November, 2009

To, ✓  
M/s Jindal Saw Limited  
Village Samaghogha, Paragpur-Mandavi Road  
Taluka Mudra, District Kutch, Gujarat

E-mail : [pramil.sirohi@jindalsaw.com](mailto:pramil.sirohi@jindalsaw.com) ; Fax No. : 011-2717 0691 ;

**Subject :** Expansion of Steel Plant (2,50,000 TPA to 3,00,000 TPA) at Village Samaghogha, Paragpur-Mandavi Road, Taluka Mudra, District Kutch, Gujarat by M/s Jindal Saw Limited – Environment clearance reg.

**Ref. :** Your letter no. nil dated 12<sup>th</sup> August, 2009.

Sir,

Kindly refer your letter no. nil dated 12<sup>th</sup> August, 2009 alongwith project documents including Form I, Terms of References, Pre-feasibility Report and EIA/EMP Report and subsequent clarification furnished vide communications dated 12<sup>th</sup> October, 2009 regarding 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 (2,50,000 TPA to 3,00,000 TPA) at Village Samaghogha, Paragpur-Mandavi Road, Taluka Mudra, District Kutch, Gujarat by M/s Jindal Saw Limited. The existing facilities are located in 226 acres land. Additional 86.14 acre land is acquired for the expansion units. 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. 400.00 Crores. Proposed project is intended to support seamless pipes of M/s JSL in terms of supplying raw Materials i.e. round/casted steel of different specifications depending on the market requirement. Following are the details of existing and proposed facilities:

S.N.	Facility	Capacity	Products
<b>Existing :</b>			
1	Blast furnace	2.5 LPTA	Hot metal / Pig iron
2	Sinter plant	10.4 LTPA	Sinter
3	Pipe Plant	8.184 LTPA	LSAW, Spiral Steel Pipes, DI & CI Pipes
4	Captive Power Plant	21,290 KVA	Power
<b>Proposed expansion :</b>			
1	Renovation and Modernization of existing Blast Furnace	2,50,000 TPA (existing) to 3,00,000 TPA	Hot metal / Pig iron
2	Mini Blast furnace	2,80,000 TPA (1x250 m <sup>3</sup> )	Hot metal / Pig iron
3	Steel Melting Shop Energy Optimized Furnace Ladle Refining furnace Vacuum Degasser Unit Continuous Caster Machine	2,80,000 TPA 1x35 TPH 2x35 TPH 1x35 TPH 1x35 TPH	Billets

4	Air Separation Unit	110 TPD	Oxygen, Nitrogen and Argon
5	Captive Power Plant (BF gas)	4 MW	Power

3.0 Steel will be produced through Blast Furnace-Energy Optimizing Furnace (EOF)-LRF-VD-CCM route. Hot metal from blast furnace, scrap and ferro alloys will be fed to Energy Optimizing Furnace (EOF). Scrap will also be melted. Molten metal from EOF will be transferred to LRF for further refining and for degassing in a vacuum degassing unit (VDU). The refined molten steel will be casted into billets in a continuous casting machine (CCM). Commercial oxygen gas will be produced in an air separation plant by fractional distillation of high pressure atmospheric air.

4.0 Gas cleaning plant, multi-cyclone, bag house, wet ventury scrubber, fume extraction system etc. will be provided to control emissions within 50 mg/Nm<sup>3</sup>. Existing and proposed water consumption is 4.0 MLD and 5 MLD respectively and permission is available for 9,500 KLD (9.5 MLD) water from Gujarat Water Infrastructure Limited (GWIL). 300 m<sup>3</sup>/day ground water will also be used. All the treated wastewater will be recycled / reused within the plant and no wastewater will be discharged outside the plant premises. The granulated blast furnace slag will be given to cement makers. Iron rich dust, scales and sludge will be reused in the sinter plant. SMS slag after metal recovery and waste refractory will be suitably disposed. Green belt will be developed in 75 acres (33 %), out of total 226 acres.

5.0 Public Hearing / Public Consultation meeting was held on 9<sup>th</sup> July, 2009.

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

**A. SPECIFIC CONDITIONS :**

- i) Compliance to all the specific and general conditions stipulated for the existing plant shall be ensured and regular reports submitted to the Ministry and its Regional Office at Bhopal.
- ii) Use of anthracite coke shall be re-examined and a report 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. On-line ambient air monitoring and continuous stack monitoring facilities for all the stacks and sufficient air pollution control devices shall be provided to keep the emission levels below 50 mg/Nm<sup>3</sup>. All the gases from blast furnace after cleaning in gas cleaning plant (GCP) shall be used as fuel for power generation. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.
- iv) Blast furnace top gas shall be cleaned in multi-cyclone and bag house. Flue gas from Energy Optimizing Furnace (EOF) shall be treated in gas cleaning plant comprising of cyclone followed by wet ventury scrubber and clean gas shall be discharged through a stack of adequate height as per CPCB guidelines. Fume extraction system with bag filters shall be provided to ladle refining furnace (LRF). The SPM emissions from all the sources shall be controlled within 50 mg/Nm<sup>3</sup>.

- v) Secondary fugitive emissions from blast furnace shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued in this regard by the CPCB should also be followed.
- vi) Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements should also be made to control dust emissions during loading and unloading of the raw material and finished product. Vehicular emissions shall be regularly monitored and records kept.
- vii) In-plant control measures for controlling fugitive emissions from spillage/raw materials handling shall be provided. Fugitive dust emissions from raw material handling system shall be minimized by using dry fogging system, air curtains and water sprinkling system. Fugitive emissions from raw material transfer points and junction points of conveyors shall be controlled by providing bag house. Coal mill shall be provided with bag filters to reduce coal dust pollution. Dedusting system shall be installed at stock house. Data on fugitive emissions shall be regularly monitored and records maintained.
- viii) Total water requirement after expansion from Gujarat Water Infrastructure Limited (GWIL) and bore wells shall not exceed 9,500 KLD (9.5 MLD) and 300 m<sup>3</sup>/day respectively as per the permission accorded by the concerned authorities. Air cooled condenser shall be provided to captive power plant to reduce water consumption. Ground water or any other surface water shall not be utilized for any construction or industrial purposes. Blow down water from cooling tower and air separation plant shall be reused as make-up water for slag granulation. Cooling tower blow down from blast furnace gas based captive power plant shall be used as make-up for dust scrubbing in EOF and recycled. DM plant regeneration water shall be neutralized and used for dust suppression and green belt development. Domestic wastewater shall be treated in sewage treatment plant (STP) and used for gardening.
- 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 the Gujarat Water Infrastructure Limited (GWIL).
- x) 'Zero' effluent discharge shall be strictly followed and no wastewater shall be discharged outside the premises.
- xi) The water consumption should not exceed 16 m<sup>3</sup>/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 should 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 should also be regularly carried out and report submitted to the Ministry's Regional Office at Bhopal, GPCB and CPCB.
- xiii) Ground water monitoring around the solid waste disposal site / secured landfill (SLF) should be carried out regularly and report submitted to the Ministry's Regional Office at Bhopal, CPCB and GPCB.
- xiv) All the blast furnace slag shall be granulated and provided to cement manufacturers for further utilization. All the dust from the air pollution control equipments and scales shall be recycled and reused in the sinter plant. All the other solid waste including SMS slag after metal recovery, sludge from EOF gas cleaning plant, broken refractory mass shall be properly disposed off in environment-friendly manner.

Spent/used oil and lubricants shall be sold to the registered recyclers as per the Hazardous Waste (Management & Handling) Rules, 1989 and subsequent amendments.

- xv) A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
- xvi) 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, GPCB and CPCB.
- xvii) As proposed, green belt shall be developed in 75 acres (33 %), out of total 226 acres in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO.
- xviii) All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be strictly implemented.
- xix) All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 9<sup>th</sup> July, 2009 shall be satisfactorily implemented.
- xx) 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 Gujarat Pollution Control Board (GPCB) 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 19<sup>th</sup> May, 1993 and standards prescribed from time to time. The Gujarat Pollution Control Board (GPCB) 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<sub>2</sub> and NO<sub>x</sub> are anticipated in consultation with the GPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Bhopal, GPCB and 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 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 (day time) and 70 dBA (night time).

- vii. The company shall undertake rainwater harvesting measures by collecting the rainwater through drains. The water collected shall be connected to raw water pipeline for reuse in the plant. The company shall provide proper drainage system for rainwater to prevent water logging within and in the vicinity of the plant.
- viii. Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- ix. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report and during the public hearing meeting. 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. 20.00 Crores and Rs. 2.00 Crores shall be earmarked towards the capital cost and recurring expenditure/annum earmarked for the environmental pollution control to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule for complying with all the conditions stipulated herein shall be submitted to the Regional Office of this Ministry at Bhopal / CPCB / GPCB. The funds so provided shall not be diverted for any other purposes.
- 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 at Bhopal, the respective Zonal Office of CPCB and the GPCB. 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 GPCB. The Regional Office of this Ministry at Bhopal / CPCB / GPCB 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 Office 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 GPCB 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.

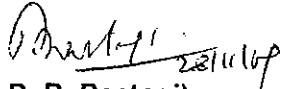
- xvi. Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

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.

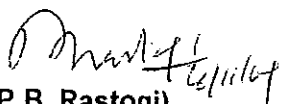
9.0 Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.

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 and Forests, Govt. of Gujarat, Gandhi Nagar, Gujarat.
2. The Chief Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office (West), Link Road No. 3, E - 5, Arera Colony, Bhopal - 462 016, M. P.
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman Gujarat Pollution Control Board, Paryavaran Bhawan, Sector 10-A, Gandhi Nagar - 382 010, Gujarat.
5. Adviser (IA-II), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, New Delhi.
7. Guard File.
8. Monitoring File.
9. Record File.

  
(Dr. P.B. Rastogi)  
Director