

By Speed Post

No. J-11015/343/2010-IA.II (M)
Government of India
Ministry of Environment and Forests
Impact Assessment Division

Paryavaran Bhavan,
C.G.O. Complex, Lodi Road,
New Delhi-110 003

Dated: January 03, 2014

To

M/s Jindal Steel & Power Ltd.
TRB Iron Ore Mines
PO.-Tensa, District-Sundargarh
Odhisra, Pin-770042
Telephone: 0662-5236024, Fax: 0662-5236022
Email- pkb@jindalsteel.com

Subject: TRB Iron Ore Beneficiation Plant with throughput of 1.0 million TPA of M/s. Jindal Steel & Power Ltd. located at Village Tantra, Tehsil Koira, Distt. Sundargarh, Odisha-Environmental Clearance regarding.

This has reference to your letter no. JSPL/Mines/2012 dated 19th December, 2012 and subsequent letter dated 9th April, 2013 on the subject mentioned above. The project was prescribed Terms of Reference (TORs) by the Ministry of Environment and Forests on 14.02.2011 for undertaking detailed EIA study for the purpose of obtaining environmental clearance. The proposal for environmental clearance was considered in its 2nd Meeting of the Reconstituted Expert Appraisal Committee for Environmental Appraisal of Mining Projects (Non-Coal) held during December 19th-21st, 2012.

2. The proposal is for setting up of iron ore beneficiation plant with a capacity of 1.0 million TPA through put using wet beneficiation process. The proposal will be helpful for reclaiming the old dumps with the objective of mineral conservation. This proposed beneficiation plant is designed for feeder grade between 45% Fe to 58 % Fe content. The project aims to utilize 11.32 million tonnes of low grade ore having high alumina and silica as per the present reserve estimation.

3. It is reported that raw material required for the beneficiation plant will be sourced from the captive mine by covered trucks/tippers at a distance of about 800m and finished product will be dispatched to through the railway siding at a distance of 17km. Total water requirement for beneficiation plant will be 969 m³/day, out of which 964 m³/day will be sourced from surface water i.e. Samij nalla and 5 m³/day from Ground water. The Proponent has obtained the ground water withdrawal permission of 854 m³/day for allied activity purpose other than mining and beneficiation plant. The Proponent, vide letter dated 24.06.2011, has applied to Water Resource Department, Govt. of Odhisra for withdrawal of water from surface water i.e. Samij nalla. The filter cake with the tune of 371100 TPA will be generated and disposed of in the designated areas. It is reported that height of tailing area to

be 30 m, capacity of tailing disposal area to be 3320610 m³ and life of tailing disposal are to be ~20 years.

4. The proposed iron ore beneficiation plant is located at Village Tantra, Tehsil Koira, Distt. Sundargarh, Odisha. The location of beneficiation plant is between the Latitude 21°53'2.691"N to 21°53'8.772"N and Longitude 85°10'22.703"E to 85°10'40.325"E and within the mine lease area. The total area of the project is 9.395 ha. Out of this area, 5.06 ha for beneficiation plant and 4.335 ha for tailing disposal. The detail breakup of earmarked land use i.e. 9.395 ha are; 1.90 ha for plant facilities, 0.34 ha for product stock yard, 4.335 ha for tailing disposal area, 0.732 ha for approach road, 1.7 ha for green belt, 0.004 ha for security building, 0.375 ha for slime pond and 0.009 ha for administrative building.

5. No National Park/Wild Life Sanctuaries/Tiger Reserve/Elephant Reserve/Turtle Nesting Ground is reported within the 10 km of project area. The water bodies viz. Samij Nala is adjacent to ML boundary, Karo Nala is 1.6 km (E), Sirki Nala is 1.2 km (W), Geria nala is 2.45 km (NW) and Badapokharia nala is 3.1 km (S) to ML boundary. Kurrahi Nadi is 6 km (WSW) from the ML boundary.

6. The baseline environmental study was carried during December 2010-February 2011 within 10 km radius of the project area. It is reported that the parameters viz. PM₁₀, PM_{2.5}, SO₂, NO_x, CO and other parameters are within permissible limits. Water quality parameters were also reported to be within permissible limit.

7. It is noted that MoEF had earlier accorded the Environmental Clearance for an annual production capacity of 3.11 million tonnes of iron ore by opencast mechanized method involving total mine lease area of 297.848 ha vide letter No. J-11015/1154/2007 on dated 17.03.2009. The Proponent has reported that the location of proposed beneficiation plant is within the mine lease area. Stage-I Forest clearance has been accorded by the MoEF vide letter No.8-63/95-FC (pt.), dt.23.11.2012 for diversion of forest land of 116.147ha + 90.505ha that includes 5.06ha for Beneficiation Plant and 4.335 ha for Tailing Dump area.

8. The public hearing of the project was held on 03.12.2011 for beneficiation plant with throughput capacity of 1.0 million TPA to obtain beneficiated Ore. The capital cost of the project is Rs. 90.60 Crores and a budget for environmental protection measures is Rs. 7.6 Crores towards capital investment and Rs. 0.50 Crore towards recurring expense/annum.

9. The Ministry of Environment and Forests has examined the application in accordance with the EIA Notification, 2006 and hereby accords environmental clearance under the provisions thereof to the above mentioned **TRB Iron ore beneficiation plant with throughput capacity of 1.0 million TPA to obtain beneficiated Ore in the area of 9.395 ha (5.06 ha for beneficiation plant and 4.335 ha for tailing disposal), located at Village Tantra, Tehsil Koira, District Sundargarh, Odisha by M/s. Jindal Steel & Power Ltd.** subject to implementation of the following conditions and environmental safeguards:-

A. Specific Conditions

- i. Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the competent authority, as may be applicable to this project.

- ii. The beneficiated ore shall be transported through road on trucks covered with tarpaulin.
- iii. Effective safeguard measures such as conditioning of ore with water, regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around crushing and screening plant, loading and unloading point and transfer points. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- iv. The project authority shall implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.
- v. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and installing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January)); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office Bhubaneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.
- vi. The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any operations.
- vii. The decanted water from the beneficiation plant and slime/tailing pond shall be re-circulated within the mine and there shall be zero discharge from the mine.
- viii. Regular monitoring of water quality upstream and downstream of adjoining water bodies shall be carried out and record of monitoring data should be maintained and submitted to Ministry of Environment and Forests, its Regional Office, Bhubaneswar, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.
- ix. The raw material required for the beneficiation plant will be sourced from the captive mine by covered trucks/tippers at a distance of about 800m and finished product will be dispatched to through the railway siding at a distance of 17km.
- x. Total water requirement for beneficiation plant will be 969 m³/day, out of which 964 m³/day will be sourced from surface water i.e. Samij nalla and 5 m³/day from the Ground water. The Proponent has obtained the ground water withdrawal permission of 854 m³/day for allied activity purpose other than mining and beneficiation plant. The Proponent, vide letter dated 24.06.2011, has applied to Water Resource Department, Govt. of Odhisa for withdrawal of water from surface water i.e. Samij nalla. In this context, the

beneficiation plant shall not operate without necessary permissions of extracting the surface water from Samij nala from the Water Resource Department, Govt. of Odhisa and from CGWA for 5m³/day of Ground water.

- xi. The filter cake with the tune of 3,71,100 TPA will be generated and disposed of in the designated areas. It is reported that height of tailing area to be 30 m, capacity of tailing disposal area to be 3320610 m³ and life of tailing disposal is to be ~20 years. The dumps will be compacted. Waste dumps will be covered initially by geo textiles coir mats and grass seeds will be sown on mats. A retaining wall will be provided at the toe of the dump to arrest the surface runoff from the dumps. Trenches will be provided to collect runoff water from the dumps.
- xii. The detail breakup of earmarked land use i.e. 9.395 ha are; 1.90 ha for plant facilities, 0.34 ha for product stock yard, 4.335 ha for tailing disposal area, 0.732 ha for approach road, 1.7 ha for green belt, 0.004 ha for security building, 0.375 ha for slime pond and 0.009 ha for administrative building shall be maintained.
- xiii. The project proponent shall obtain Consent to Operate from the State Pollution Control Board, Andhra Pradesh and effectively implement all the conditions stipulated therein.
- xiv. As part of ambient air quality monitoring during operational phase of the project, the air samples shall also be analysed for their mineralogical composition and records maintained.
- xv. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhubaneswar on six monthly basis.
- xvi. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- xvii. Appropriate mitigative measures shall be taken to prevent pollution of River, if any, in consultation with the State Pollution Control Board.
- xviii. Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, Central Ground Water Board.
- xix. Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral from mine face to the beneficiation plant. The vehicles shall be covered with a tarpaulin and shall not be overloaded.
- xx. Mineral handling plant shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.

- xxi. Sewage treatment plant shall be installed. ETP shall also be provided for workshop and wastewater generated during mining operation.
- xxii. Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment and Forests and its Regional Office, Bhubaneswar.
- xxiii. Regular monitoring of ambient air quality including free silica shall be carried out and records maintained.
- xxiv. Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.
- xxv. The issues raised during Public Hearing viz. recycling of waste water, dust suppression and appropriate dump management, installation of transformer, development of road, local employment, appointment of qualified teacher for school, street light, health camp, development of periphery and drinking water facility for nearby villages etc. shall be implemented.

B. General Conditions

- (i) No change in technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.
- (ii) No change in the calendar plan with regard to capacity of beneficiation plant, quantum of mineral iron ore and waste should be made.
- (iii) At least four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 micron i.e., PM₁₀) and NO_x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board. The data so recorded should be regularly submitted to the Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.
- (iv) Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.
- (v) There will be zero waste water discharge from the plant.
- (vi) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

- (vii) Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
- (viii) A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.
- (ix) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Bhubaneswar.
- (x) The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- (xi) The Regional Office of this Ministry located at Bhubaneswar 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.
- (xii) The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Office Bhubaneswar , the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board. The proponent shall upload the status of compliance of the environmental 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 Ministry of Environment and Forests, Bhubaneswar, the respective Zonal Officer of Central Pollution Control Board and the State Pollution Control Board.
- (xiii) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/ 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 website of the Company by the proponent.
- (xiv) The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office/ Tehsildar's Office for 30 days.
- (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 along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Office of the Ministry of Environment and Forests, Bhubaneswar by e-mail.

(xvi) The project authorities should advertise at least in two local newspapers of the District or State in which the project is located and widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneswar .

10. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

11. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

12. The above conditions will 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 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court of Odhisa and any other Court of Law relating to the subject matter.

13. Any appeal against this environmental clearance 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.

(Dr. V.P. Upadhyay)
Director

Copy to:

1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
2. The Secretary, Department of Environment, Government of Orissa, Secretariat, Bhubaneswar.
3. The Secretary, Department of Mines and Geology, Government of Orissa, Secretariat, Bhubaneswar.
4. The Secretary, Department of Forests, Government of Orissa, Secretariat, Bhubaneswar.
5. The Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests, A-3 Chandrashekharpur, Bhubaneswar-751023.
6. The Chairman, Orissa State Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012.

7. The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
8. The Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001
9. The District Collector, Sundargarh District, State of Orissa.
10. Guard File
11. MoEF Website



(Dr. V.P. Upadhyay)
Director