

No. J-11011/220/2004 – IA II (I)  
Government of India  
Ministry of Environment & Forests

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March 18, 2005

To

The Jt. Executive President  
M/s HINDALCO Industries Limited  
(Unit Birla Copper)  
Dahej, Distt Bharuch,  
Gujarat-392130  
India

**Sub: Phase-III Copper Smelter expansion project by M/s Hindalco Industries Limited from 2,50,000 TPA to 5,00,000 TPA and from 67.35 to 146.50 MW Captive power plant at village Laknigam and Dahej, Tehsil Vagra, District Bharuch in Gujarat.**

Sir,

This has reference to your letter no. HIL/TIC/01-D dated 25.11.2004 along with project documents including EIA /EMP, questionnaire and CD containing all the documents and subsequent clarifications / additional information furnished via your letters dated 13.12.2004 and 10.01.2005 on the above mentioned project. The Ministry of Environment & Forests has examined your application. It is noted that expansion proposal envisages increase in the capacity of Copper cathode-5,00,000 TPA, CC rod-1,20,000 TPA, sulphuric acid-14,70,000 TPA, Phosphoric acid-3,60,000 TPA, DAP/NPK fertiliser-8,72,000 TPA, PMR(Gold)- 26 TPA, and PMR(Silver)-200 TPA, Zinc- 1,00,000 and power requirement of 145.60 MW. It is also noted that process technology for copper smelter plant will be continuous copper smelting and converting technology of Mitsubishi Japan. For copper refinery, the technology is from Mount ISA Mines, Australia.

Expansion will be carried out within the existing plant area of 238 ha. It is also noted that additional land of 117 ha has been acquired for future use for solid waste disposal etc. Thus, total land area available is 365 ha. The project does not involve forest land and displacement of people. Water requirement of 16972 m<sup>3</sup>/day will be met from the GIDC. Permission to draw 11MGD of water from GIDC has been obtained. The solid waste will be generated in the form of ETP sludge (80,000 TPA), granulated slag (3,93,000 TPA), fly ash (30,000 TPA), phospo-gypsum (9,00,000 TPA) and Copper-As precipitate (250 TPA). The granulated slag will be used for construction of road and as building material, phosfogypsum would be used as additive in cement, fertilizer manufacturing, POP, fly ash brick manufacturing and as

soil conditioner. Fly ash would be used for manufacturing of brick, cement and road construction material. The ETP cake would be disposed off in the TSD developed as per Central Pollution Control Board guidelines and Cu-As would be completely recycled in smelter plant. It is also noted that NOC from Gujarat State Pollution Control Board has been obtained on 20.11.2004. The public hearing panel has considered the project in its meeting held on 10.08.2004. Cost of the expansion is Rs.1205 crores.

2.0. The Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 27<sup>th</sup> January, 1994 as amended subsequently subject to strict compliance of the following specific and general conditions:

**A. SPECIFIC CONDITIONS**

- (i) All the conditions stipulated by the Ministry while according environmental clearance to the existing project vide its letter No. J-11011/86/2002-IA.II (I) dated 10<sup>th</sup> February, 2004 shall be strictly implemented.
- (ii) The gaseous emissions from various process units should conform to the standards prescribed by the concerned authorities from time to time. The State Pollution Control 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 emissions level should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.
- (iii) The effluent generation shall not exceed 2655 m<sup>3</sup>/d (2525 m<sup>3</sup>/d of industrial effluent and 130 m<sup>3</sup>/d of domestic effluent). The Company shall undertake measures to reduce the water consumption by recycling/ reuse measures. The company shall achieve zero discharge as per the action plan submitted to the Ministry by use of treated waste water after conforming to the prescribed standards for green belt development (1330m<sup>3</sup>/d), lime slurry preparation (475m<sup>3</sup>/d), make up in slag granulation (480m<sup>3</sup>/d) and gas cleaning section (370m<sup>3</sup>/d). Domestic effluent shall be treated in the STP and used for green belt development.
- (iv) The company shall install cyclone and bag-filter to control the particulate emission in concentrates handling area. The recovered dust shall be recycled.
- (v) The company shall recover the energy from the smelter and use it for waste heat boiler. Secondary gases from the smelter shall be passed through centralized scrubbing system. Off gases from the re-boiler shall be cleaned by installation of high efficiency ESP.

- (vi) As per the action plan submitted to the Ministry, the Company shall achieve SO<sub>2</sub> emission of 1kg/tonne of sulfuric acid produced. The company shall install scrubber to scrub emissions during start and shut down of H<sub>2</sub>SO<sub>4</sub> plant. The acid mist emission should conform to the prescribed standard of 50mg/Nm<sup>3</sup>.
- (vii) To control the total fluoride emission within the prescribed standards of 25mg/Nm<sup>3</sup> in the phosphoric acid plant, the company shall provide multi stage scrubbers in the phosphoric plant.
- (viii) The company shall provide HDPE lined facility with proper leachate collection system for phospho gypsum storage. ETP sludge shall be disposed off in the TSDF developed as per the Central Pollution Control Board guidelines. The ground water quality around the phospho-gypsum and ETP sludge disposal area shall be monitored and data submitted to the Ministry.
- (ix) Green belt in 106.0 ha. of project area shall be provided to mitigate the effects of fugitive emissions all around the plant. The development of green belt should be in consultation with the DFO as per the CPCB guidelines.
- (x) The company shall firm up the action plan for solid waste management and submitted to the Ministry.
- (xi) The company shall take measures for harvesting the rainwater to recharge the ground water.

#### **B. GENERAL CONDITIONS**

- (i) The project authorities must strictly adhere to the stipulations made by the Gujarat State Pollution Control Board.
- (ii) No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment & Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- (iii) The project authorities must strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous chemicals Rules, 1989 as amended in October, 1994 and January, 2000. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate etc. must be obtained.
- (iv) The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules, 2003. Authorization from the State Pollution Control Board must be obtained for collections/treatment/storage/disposal of hazardous wastes.

- (v) The overall noise levels in and around the plant area should 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).
- (vi) Occupational health surveillance programme should be undertaken as regular exercise for all the employees, specifically for those engaged in handling hazardous substances. The first aid facilities in the occupational health centre should be strengthened and the medical records of each employees should be maintained separately.
- (vii) The project proponent should have a scheme for social upliftment in the surrounding villages with reference to contribution in road construction, education of Children, festivals, health centres, sanitation facilities, drinking water supply, community awareness and employment to local people whenever and wherever possible both for technical and non-technical jobs.
- (viii) The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA and Risk analysis Report.
- (ix) A separate Environmental Management Cell equipped with full fledged laboratory facilities must be set up to carry out the Environmental management and monitoring functions.
- (x) The project authorities shall earmark an amount of Rs. 162.65 crores (as mentioned in question no. xix of questionnaire) to implement the conditions stipulated by the Ministry of Environment & Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purpose.
- (xi) The implementation of the project vis-à-vis environmental action plans will be monitored by Ministry's regional office at Bhopal / State Pollution Control Board / Central Pollution Control Board. A six monthly compliance status report should be submitted to monitoring agencies.
- (xii) The Project Proponent should inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>. This should 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.

(xiii) The Project Authorities should 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, if any.

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

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

5.0 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, the Hazardous Wastes (Management and Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules.

*P. Ahujara*

(Dr. P. L. Ahujara)  
Additional Director

Copy to:

1. The Secretary, Department of Environment and Forests, Govt. of Gujarat, Block No. 14, 8<sup>th</sup> floor, Sachivalaya, Gandhinagar- 382010.
2. The Chief Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office, E-3 / 240 Arera Colony Bhopal - 462 016.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar New Delhi - 110 032.
4. The Chairman Gujarat Pollution Control Board, Paryavaran Bhavan, Sector-10A, Gandhi Nagar, -382043
5. JS(CCI-I), 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. Guard File.
8. Monitoring File.
9. Record File.

(Dr. P. L. Ahujara)  
Additional Director