

F. No. J-11011/479/2006- IA II (I)  
**Government of India**  
**Ministry Environment and Forests**  
**(I.A. Division)**

**Paryavaran Bhawan**  
**CGO Complex, Lodhi Road**  
**New Delhi – 110 003**

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**Dated 19<sup>th</sup> March, 2008**

To ✓  
M/s Hindustan Zinc Ltd.  
Zinc Smelter, Debari – 313004  
Udaipur, Rajasthan.

**E-mail : [csr.mehta@vedanta.co.in](mailto:csr.mehta@vedanta.co.in) / [govind.ram@vedanta.co.in](mailto:govind.ram@vedanta.co.in)**  
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**Subject : Expansion of Zinc Smelter (80,000 TPA to 1,00,000 TPA) at Debari, Udaipur, Rajasthan by M/s Hindustan Zinc Ltd. – Environmental clearance reg.**

Sir,

This has reference to your letter no. nil dated 6<sup>th</sup> December, 2006 alongwith Form I, application, EIA/EMP and related project documents and subsequent clarifications furnished by you vide your letters dated 4<sup>th</sup> January, 2007, 30<sup>th</sup> January, 2007, 5<sup>th</sup> February, 2007, 13<sup>th</sup> March, 2007, 16<sup>th</sup> March, 2007, 16<sup>th</sup> April, 2007 and 29<sup>th</sup> November, 2007 for seeking environmental clearance of the above mentioned project under the EIA Notification, 2006.

2.0 The Ministry of Environment and Forests has examined your application. It is noted that the proposal involves expansion of Zinc Smelter (80,000 TPA to 1,00,000 TPA) at Debari, Udaipur, Rajasthan. Total existing land is 190.05 ha. and no additional land will be required for the expansion project. 18 reserve forests are located within 10 km. of the site. No national park or wildlife sanctuary lies within 10 km. of the site. Total cost of the project is Rs. 220.00 Crores. Following items will be manufactured:

Particulars	Present production (TPA)	Proposed production (TPA)	Total production after expansion (TPA)
Zinc metal	80,000	20,000	1,00,000
Sulphuric Acid	1,30,000	2,89,000	4,19,000
Calcine	1,45,000	3,00,000	4,45,000
Cadmium	250	70	320

3.0 Roast-Leach-Electro-winning process (hydro metallurgical route) will be adopted for the Zinc extraction. During expansion, Roaster and Sulphuric acid plant will be installed. Zinc concentrate will be sourced from the captive mines of HZL and also imported.

4.0 Bag filters will be provided to control particulate matters from Zn smelter and Moore cake treatment plant. Cyclone, scrubber, wet ESP, Fluoride removal plant, absorption tower, demister



etc. will be installed in the Sulphuric acid plant. Total requirement of water from Udai Sagar Dam will be 8,000 m<sup>3</sup>/day and 'Agreement' is signed with Govt. of Rajasthan vide letter dated 23.7.97 and revalidated vide letter dated 4th January, 2007 till 22<sup>nd</sup> July, 2012. Existing ETP will be used for the effluent treatment. ETP cake will be used in Moore cake treatment plant. 'Zero' discharge will be adopted. All the process residues including spent catalyst, Cobalt cake, anode mud, cooler coke, Copper cake etc. except Jarosite Mercury sludge will be disposed off in CHWMF at Gudli of M/s Ramky. Jarosite sludge will be disposed off in secured landfill (SLF).

5.0 Public Hearing / Public Consultation meeting was held on 30<sup>th</sup> April, 2007.

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 subject to strict compliance of the following specific and general conditions.

**A. SPECIFIC CONDITIONS:**

- i. The company shall install on-line stack emission monitoring equipments for continuous monitoring of SO<sub>2</sub>, NO<sub>x</sub>, SPM and O<sub>2</sub> and all the pollution control measures shall be inter-locked. The company shall install fume extractors and bag filters to control the emissions from all melting and casting units including Moore cake treatment plant. Cyclone, scrubber, wet ESP, Fluoride removal plant, absorption tower, demister etc. shall be installed in the Sulphuric acid plant I & II to control dust and SO<sub>2</sub> emissions within the stipulated limits of 50 mg/Nm<sup>3</sup> and reports submitted to the Ministry including its Regional Office at Lucknow, CPCB and RSPCB.
- ii. SO<sub>2</sub> emissions shall be controlled less than 1.5 kg/ton of Sulphuric acid (H<sub>2</sub>SO<sub>4</sub>) produced and acid mist less than 50 mg/Nm<sup>3</sup>.
- iii. Secondary fugitive emissions from all the sources including Roaster plant shall be controlled, regularly monitored and data submitted to the Regional Office of the Ministry at Lucknow, UPPCB and CPCB.
- iv. Total water requirement from Udai Sagar Dam shall not exceed 8,000 m<sup>3</sup>/day as per the agreement signed with Govt. of Rajasthan. No ground water will be used. As reflected in the EIA/EMP, all the effluent generated from gas cleaning plant, Sulphuric acid plant, anode & cathode washing, demineralization plant and cooling tower shall be treated in the effluent treatment plant (ETP). The treated effluent shall conform to the prescribed standards and recycled to maintain the 'zero' discharge. Sewage shall be treated in sewage treatment plant (STP).
- v. All the process residues, spent catalyst, Cobalt cake, anode mud, cooler coke, Copper cake etc. shall be disposed off in common hazardous waste management facility (CHWMF) at Gudli of M/s Ramky. The Jarosite sludge shall be neutralized with hydrated lime and disposed off in secured landfill (SLF) inside the plant premises. ETP Sludge in the form of cake shall be recycled in the Moore cake treatment plant. Waste/used oil shall be sold to registered recyclers. Valid membership to CHWMF shall be obtained.
- vi. As proposed in EIA/EMP, canopy based green belt of adequate width and density in and around the periphery of plant in 67.5 ha. out of total 190.05 ha. shall be developed as per CPCB guidelines.



- vii. Permission and recommendations of the State Forest Department regarding impact of the proposed expansion on surrounding 18 reserve forests shall be obtained and all the recommendations shall be implemented. Further, Conservation Plan for the conservation of wild fauna in consultation with the State Forest Department shall be prepared and implemented.
- viii. Regular medical examination and health monitoring of all the employees for Lead (Pb) and Cadmium (Cd) shall be carried out and if cases of presence of Lead (Pb) and Cadmium (Cd) are detected, necessary compensation shall be arranged under the existing laws. A competent occupational health physician shall be appointed to carry out medical surveillance. Occupational health of all the workers shall be monitored for relevant parameters and records maintained for at least 40 years from the beginning of the employment or 15 years after the retirement or cessation of employment whichever is later.
- ix. All the recommendations made in Charter for Corporate Responsibility for Environment Protection (CREP) for Zinc smelters shall be implemented.

**B. GENERAL CONDITIONS:**

- i. The project authorities must strictly adhere to the stipulations made by the Rajasthan State Pollution Control Board (RSPCB) and the State Government.
- ii. No 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 standards prescribed by the concerned authorities from time to time. The Rajasthan State Pollution Control Board (RSPCB) 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 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. Adequate number of 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 Rajasthan State Pollution Control Board. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Lucknow and the CPCB / RSPCB once in six months.
- x. Fugitive emissions, acid mist vapours, fumes and SO<sub>2</sub> shall be controlled and work environment monitored for prevailing contaminants regularly. Fugitive dust emissions in the handling area and at various transfer points shall be minimized by provision of dust suppression system. Bag filters shall be installed in the Roaster, Calcine handling & storage section, Zn atomizing unit, Dross milling section to control fugitive emissions. The Company shall improve overall house keeping by asphaltting the internal roads and to reduce the generation of fugitive dust from vehicle movements.
- 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 recycled in the plant as well as utilization for plantation purposes.

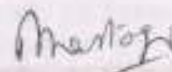
- vi. The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules, 2003. Authorization from the State Pollution Control Board must be obtained for collection, storage, treatment and disposal of hazardous wastes.
- 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 should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).
- viii. Occupational Health Surveillance of the workers shall 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 /risk analysis and DMP report.
- x. The project authorities shall provide Rs. 76.00 Crores towards environmental pollution control measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government and submit an implementation schedule for all the conditions stipulated herein to this Ministry and its Regional Office at Lucknow. The funds so provided shall not be diverted for any other purposes.
- xi. The Regional Office of this Ministry at Lucknow, CPCB / RSPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation should be submitted to them regularly.
- xii. 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 Rajasthan State Pollution Control Board 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.
- xiii. The 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, the Hazardous Wastes (Management and Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules.



(Dr. P. B. Rastogi)  
Director

Copy to :

1. Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 110032.
2. Chairman, Rajasthan State Pollution Control Board, 4, Institutional area, Jhalana, Doongri, Jaipur, Rajasthan.
3. Chief Conservator of Forests (Central), Ministry of Environment and Forests, Central Region, Kendriya Sadan, Sector H, Aliganj, Lucknow - 226 024, U.P.
4. Secretary, Department of Environment and Forests, Government of Rajasthan, Jaipur, Rajasthan.
5. Adviser (IA-II), Ministry of Environment and Forests, Paryavaran Bhawan, 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