

No.J-11015/38/99-IA.II(M)  
Government of India  
Ministry of Environment & Forests

Paryavaran Bhawan,  
C.G.O.Complex, Lodi Road,  
New Delhi-110003.

Dated: 21<sup>st</sup> July 2003

To

Shri Sunil Nakra.  
DGM( Mines).  
Gujarat Industries Power Company Ltd.,  
(Surat Lignite Power Project),  
Nani Naroli, Mangrol Taluk,  
SURAT District- 349110.  
GUJARAT.

**Subject: Mangrol-Valia Lignite Mine (4.2 MTPA) of M/s Gujarat Industries Power Company Ltd. located in villages Mangrol, Shah, Charetha, Amandera, Harsani, Timberwa, Bhilwada, Nani Pardi, Luna, Dansoli, Rajgarh, and Kosmadi in mangrol Valia Tehsil of Surat and Bharuch Districts of Gujarat – environmental clearance –reg.**

Sir.

This has reference to Industries and Mines Department. Government of Gujarat letter No.MCR-1098-1109-CHH dated 30.03.2000, your letter dated 27.10.1999 and subsequent communications dated 07.04.2000, 16.09.2000, 06.11.2000, 01.05.2001, 08.09.2001, 01.01.2002, 18.05.2002, 19.06.2003, and 20.06.2003 regarding the project mentioned above. The Ministry of Environment and Forests has considered your application. It has been noted that the total mining lease area is 2080 ha. of which 2050 ha is agricultural land and remaining 30 ha is wasteland. Mining will be restricted to 1319.67 ha, 50 ha is for storage of topsoil and lignite stock pile and 311 ha is for OB storage. **No forestland is involved.** Working is by opencast mechanised method. Working will not go beyond 110 m below ground level (bgl). The annual targeted production capacity of the mine is 4.24 Million tonnes. Thirty-five hutments comprising the population of 125 people will be rehabilitated. Public Hearing was held on 30.07.1999. Water requirement of 3500 m<sup>3</sup>/d (mine site –2500 m<sup>3</sup>/d and drinking water including township – 1000 m<sup>3</sup>/d) will be met from harvested rainwater to be collected in a pond to be constructed before starting mining and from treated water from ash recovery pond. About 7.35 lakh m<sup>3</sup>/month of OB will be generated. Back filling will be started from 2½ year of commencement of mining operations and the OB in the external dumps will be backfilled by 6<sup>th</sup> year of commencement of mining. The Gujarat Pollution Control Board granted Consent to Establish (NOC) for 17,500 MT per day of lignite production. The Ministry of Coal has approved the

Mining Plan for 4.2 million TPA production. Diversion of Kim river is proposed during the 17<sup>th</sup> year of Operation through backfilled area. Capital cost of the project is Rs.595.0 crores.

2. The Ministry of Environment and Forests hereby accords environmental clearance to the above-mentioned lignite mine of Gujarat Industries Power Company Ltd. to produce 4.2 million TPA by opencast mechanised method involving a lease area of 2080 ha under the provisions of the Environmental Impact Assessment Notification, 1994 as amended on 04.05.1994 and 10.04.1997 subject to the compliance of the terms and conditions mentioned below:

**A. Specific Conditions**

- (i) Top soil should be stacked properly with proper slope at earmarked site(s) with adequate measures and should be used for reclamation and rehabilitation of mined out area.
- (ii) OB dumps of 204 ha in Mangrol Block and 107 ha of Valia Block would be made. OB should be stacked at earmarked dumpsite(s) only. The total height of the dumps should not exceed 50m in two stages of 25 m each. The overall slope should not exceed 28 degree. A stone masonry retaining wall will be constructed along the toe of the dump. Concurrent backfilling should start from the 6<sup>th</sup> year. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhopal on yearly basis.
- (iii) Catch drains and siltation ponds of appropriate site should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilised for watering the ine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly.  
Garland drains (size, gradient & length) and sump capacity should be designed keeping 50% safety margin over and above the peak suddn rainfall and maximum discharge in the area adjoining the mines site. Sump capacity should also provide adequate retention period to allow proper settling of silt material.
- (iv) Dimension of the retaining wall at tie toe of dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.
- (v) All efforts should be made by the project proponent to exclude acquisition of 25 ha of grazing land, if not found feasible, extra land should be acquired in non-mineralised area for development of an alternate grazing ground.
- (vi) A detailed mine commissioning plan should be submitted to the Ministry of Environment & Forests 5 years in advance of approval.
- (vii) A green belt of adequate width should be raised for suppression of dust by planting the native plant species around ML area, along ML boundary, roads, OB dump sites, etc. in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha. At the end of 20<sup>th</sup> year, plantations should cover (a)



backfilled area – 1038.16 ha., (b) external OB dumps – 311 ha., (c) 50 ha of topsoil dump, and 328.84 ha of greenbelt.

- (viii) Regular monitoring of groundwater level and quality should be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring should be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons. Data thus collected should be submitted to the Ministry of Environment & Forests and the Central Ground Water Board, Ahmedabad quarterly within one month of monitoring.
- (ix) Project authorities should furnish ground water resource estimation either block or buffer zone wise and also assess impact on ground water regime accordingly and submit report to MOEF and CGWA, Delhi, within six months.
- (x) The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to de-watering of the mine.
- (xi) Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and CHP wastewater.
- (xii) Digital processing of the entire lease area using remote sensing techniques should be done regularly once in 3 years for monitoring land use pattern and report submitted to MOEF and its Regional Office at Bhopal.
- (xiii) Efforts will be made to exclude acquisition of 25 ha of grazing land. If not found feasible, extra land will be acquired in non-mineralised area for development of an alternate grazing ground.


#### **B. General conditions**

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.
- (iii) Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub>, and CO monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the Gujarat State Pollution Control Board.
- (iv) Data on ambient air quality (RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub> and CO) should be regularly submitted to the Ministry including its Regional Office at Bhopal and the Gujarat State Pollution Control Board and the Central pollution Control Board once in six months.

- (v) Drills should be wet operated or with dust extractors and controlled blasting should be practised.
- (vi) Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading & unloading) points should be provided and properly maintained.
- (vii) Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operations of HEMM, etc., should be provided with ear plugs/muffs.
- (viii) Industrial wastewater (workshop and wastewater from the mine) should 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. Oil and grease trap should be installed before discharge of workshop effluents.
- (ix) Vehicular emissions should be kept under control and regularly monitored.
- (x) Acid mine water, if any, has to be treated and disposed of after conforming to the standard prescribed by the competent authority.
- (xi) Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the Gujarat State Pollution Control Board.
- (xii) 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.  
Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
- (xiii) 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 Company.
- (xiv) 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 Bhopal.
- (xv) The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.
- (xvi) A copy of the clearance letter will be marked to concerned Panchayat/local NGO, if any, from whom and suggestion/representation has been received while processing the proposal.



- (xvii) State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsildar's Office for 30 days.
- (xviii) The project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of 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 may also be seen at web site of the Ministry of Environment & Forests at <http://envfor.nic.in>.
3. The Ministry or any other competent authority may stipulate any further condition for environmental protection.
4. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance.
5. 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.

  
(Dr. T. Chandini)  
Additional Director