

No. J-11015/968/2007-IA.II(M)

Government of India
Ministry of Environment & Forests

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

Dated the 29th October, 2010

To

M/s Gujarat Mineral Development Corporation Ltd.
Khanij Bhavan, 132 Ft Ring Road, University,
Ground, Vastrapur,
Ahmedabad-52
E-mail: env@gmdcltd.com

Subject: Mewasa-I Bauxite Mining Project of M/s Gujarat Minerals Development Corporation Ltd. located in Village Mevasa, Tehsil Kalyanpur, District Jamnagar, Gujarat- environmental clearance regarding.

Sir,

This has reference to your letter No. GMDC/ENV/MoEF/299/2009 dated 19.09.2009 and subsequent letters dated 13.10.2009, 11.02.2010, 28.04.2010, 10.05.2010 and 15.07.2010 on the subject mentioned above. The project was earlier prescribed Terms of Reference (TORs) by the Ministry of Environment and Forests on 25.06.2008 for undertaking detailed EIA study for the purpose of obtaining environmental clearance. The proposal is for grant of environment clearance for renewal of mine which fall due since June, 1999 for production of 1,25,000tonnes per annum(TPA) (0.125 million TPA) of bauxite. The mine is reported to be closed presently since 2002.

2. The total mine lease area of the project is 186.96ha, which is a Government wasteland. No forestland is involved. Area proposed for mining is 64.87ha, an area of 6.51ha is kept for storage of topsoil and sub-grade material, 1.12ha for OB dumps, 6ha for roads, 17ha for green belt and 91.46ha is others. The seasonal river Ran flows adjacent to the mine lease. It was categorically stated by the proponent that no part of the mine lease falls within CRZ.

3. The Marine Sanctuary is located at a distance of 3.4km from the mine lease. In support of this an authenticated map from the Chief Wildlife Warden, Gujarat has been provided vide letter No.WLP/32/A/594-96/2009-10 dated 19.09.2009. Three reserve forests namely Pindara RF, Mevasa RF and Virpur RF are reported to be located in the buffer zone of the mine and the area of Pindara RF is reported to be nearer to the mine lease, i.e.1km. The Chief Wildlife Warden vide letter No. WLP/32/A/640-42/2009-10 dated 27.10.2009 provided their opinion and stipulated various conditions.

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4. The mine working will be opencast by semi-mechanized method involving drilling and blasting. The targetted production capacity of the mine is 1,25,000TPA of bauxite and the life of mine is 6years. Approximately 400TPD of mineral bauxite will be transported through the road. The topography of the area is flat and undulated at an elevation above mean sea level ranging from 25m to 50m. It has been reported that mining will be carried out up to 5m depth, which is above water table. The groundwater table will not be disturbed, which is below 8m during post-monsoon. It has also been stated that the site elevation is higher than the sea level and the direction of flow of groundwater is towards the sea. There is no possibility of ingress of seawater due to the proposed mining activity. The peak water requirement for the project is estimated as 15m³ per day, which will be obtained from the old Mevasa mine pit. There is no population in the core zone, displacement of population and R&R has not been envisaged, therefore. It has been estimated that 5,40,007tonnes of waste will be generated during the life of the mine, which will be used for mine reclamation. Out of the total excavated area of 64.87ha, an area of 9.1ha will be backfilled and developed as pasture land. Plantation will be raised in an area of 27.22ha at the end of the mine life and an area of 55.77ha will be converted into water body during the post mining stage.

5. The public hearing of the project was held on 15.09.2006. The Indian Bureau of Mines had approved the mining plan alongwith PMCP of the project on 24.03.2010 for lease area of 186.96ha. The capital cost for the environmental protection measures is proposed as Rs.46Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs.21Lakhs. It has been stated that no court case is pending against the project or related activities.

6. 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 Mewasa-I Bauxite Mining Project of M/s Gujarat Minerals Development Corporation Limited for an annual production capacity of 1,25,000tonnes(0.125million tones) of bauxite by the opencast semi-mechanized method involving total mine lease area of 186.96ha, subject to implementation of the following conditions and environmental safeguards.

A. Specific conditions

- (i) The project proponent shall obtain Consent to Establish and Consent to Operate from the Gujarat State Pollution Control Board and effectively implement all the conditions stipulated therein.
- (ii) Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No. 460 of 2004, as may be applicable to this project.

- (iii) Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the competent authority, as may be applicable to this project.
- (iv) The project proponent shall effectively implement the conditions stipulated by the Chief Wildlife Warden and Principal Chief Conservator of Forests, Gandhinagar vide their letter No. WLP/32/A/640-42/2009-10 dated 27.10.2009.
- (v) Requisite prior clearance from the Standing Committee of the National Board for Wildlife shall be obtained due to location of the Marine Sanctuary within 10km of the mine lease, before starting any activity relating to the project at site. All the conditions stipulated by the Standing Committee shall be effectively implemented in the project. It shall be noted that this clearance does not necessarily implies that wildlife clearance shall be granted to the project and that your proposal for wildlife clearance shall be considered by the competent authorities on its merit and decision taken. The investment made in the project, if any based on environmental clearance granted to the project, in anticipation of the clearance from wildlife clearance shall be entirely at the cost and risk of the project proponent and Ministry of Environment and Forests shall not be responsible in this regard in any manner.
- (vi) The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. In case of working below ground water table, prior approval of the Ministry of Environment & Forests and Central Ground Water Authority shall be obtained for which a detailed hydro-geological study shall be carried out taking into account the aspect of salinity ingress, if any.
- (vii) The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations.
- (viii) The top soil shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.
- (ix) The over burden (OB) generated shall be concurrently backfilled. There shall be no external over burden dump. Out of the total excavated area of 64.87ha, an area of 9.1ha shall be backfilled and developed as pasture land. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhopal on six monthly basis.
- (x) The void left unfilled in an area of 55.77ha shall be converted into water body. The higher benches of excavated void/mining pit shall be terraced and plantation done to stabilize the slopes. The slope of higher benches shall be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out along the excavated area.

- (xi) Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, soil and mineral dumps to prevent run off of water and flow of sediments directly into the Ran River and other water bodies. The water so collected shall be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted, particularly after the monsoon, and maintained properly.

Garland drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed around the mine pit, topsoil dumps and the mineral dumps to prevent run off of water and flow of sediments directly into the Ran River and other water bodies and sump capacity shall be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.

- (xii) Dimension of the retaining wall at the OB benches within the mine to check run-off and siltation should be based on the rainfall data.
- (xiii) Plantation shall be raised in an area of 27.22ha including a 7.5m wide statutory barrier all around the mining lease, around water body and benches of the excavated pits, roads etc. by planting the native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 1500 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.
- (xiv) Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- (xv) The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.
- (xvi) Regular monitoring of ground water level and quality shall be carried out within the mine lease and in the surrounding area by establishing a network of groundwater monitoring stations (existing wells and installing new piezometers) during the mining operation in consultation with Central Groundwater Authority / Ground Water Board and groundwater table will be monitored and records maintained. 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 Bhopal, 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 and salinity ingress in groundwater is observed due to the mining activity, necessary corrective safeguard measures shall be taken in consultation with the Central Ground Water Authority.

- (xvii) The project proponent shall practice suitable rainwater harvesting measures on long term basis and work out a detailed scheme for rainwater harvesting in consultation with the Central Groundwater Authority and submit a copy of the same to the Ministry of Environment and Forests and its Regional Office, Bhopal.
- (xviii) Appropriate mitigative measures shall be taken to prevent pollution of the Ran River in consultation with the State Pollution Control Board.
- (xix) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water, if any) required for the project.
- (xx) Vehicular emissions shall be kept under control and regularly monitored and checked. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.
- (xxi) Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
- (xxii) Drills shall either be operated with dust extractors or equipped with water injection system.
- (xxiii) Mineral handling area 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.
- (xxiv) Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and wastewater generated during the mining operation.

- (xxv) 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.
- (xxvi) Provision shall be made for the housing of 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.
- (xxvii) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely desert cat etc. spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. All the safeguard measures brought out in the Wildlife Conservation Plan so prepared specific to the project site shall be effectively implemented. A copy of action plan shall be submitted to the Ministry of Environment and Forests and its Regional Office, Bhopal.
- (xxviii) The critical parameters such as RSPM (Particulate matter with size less than 10micron i.e., PM_{10}) and NO_x in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically . Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The Circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.
- (xxix) A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.

B. General conditions

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral bauxite and waste should be made.

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- (iii) Atleast 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 10micron 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.
- (iv) Data on ambient air quality [(RSPM(Particulate matter with size less than 10micron i.e., PM₁₀) and NO_x] should be regularly submitted to the Ministry including its Regional office located at Bhopal and the State Pollution Control Board / Central Pollution Control Board once in six months.
- (v) Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
- (vi) 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.
- (vii) Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.
- (viii) 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 program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
- (ix) 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.
- (x) 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.
- (xi) The project authorities should inform to the Regional Office located at Bhopal regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

- (xii) 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 officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.
- (xiii) 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 Bhopal, 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, Bhopal, the respective Zonal Officer of Central Pollution Control Board and the State Pollution Control Board.
- (xiv) 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.
- (xv) 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.
- (xvi) 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, Bhopal by e-mail.
- (xvii) The project authorities should advertise at least in two local newspapers 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 Bhopal.

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

8. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.

9. 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 thereunder and also any other orders passed by the Hon'ble Supreme Court of India/ High Court of Gujarat and any other Court of Law relating to the subject matter.

10. 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 Authority Act, 1997.


 (SATISH C. GARKOTI)
 Scientist 'E'

Copy to:

- (i) The Secretary, Ministry of Mines, Government of India , Shastri Bhawn, New Delhi-110 001.
- (ii) The Secretary, Department of Mines & Geology, Government of Gujarat, Secretariat, Gandhinagar.
- (iii) The Secretary, Forest and Environment Department, Government of Gujarat, Block No. 14, 8th Floor Sachivalaya, Gandhinagar- 382 010
- (iv) The Chief Conservator of Forests, Regional Office (WZ), E-3/240, Arera Colony, Bhopal-462 016.
- (v) The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office complex, East Arjun Nagar, New Delhi-1100032.
- (vi) The Member Secretary, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- (vii) The Chairman, Gujarat State Pollution Control Board, Sector 10-A, Gandhi Nagar - 382043, Gujarat.
- (viii) The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.

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- (ix) The District Collector, Jamnagar District, Government of Gujarat.
- (x) EI Division, Ministry of Environment and Forests, Paryavaran Bhavan ,
C. G. O. Complex, Lodi Road, New Delhi-110 003.
- (xi) Monitoring File.
- (xii) Guard File.
- (xiii) Record File.