

No. J-11015/308/2010-IA.II (M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
CGO Complex, Lodhi Road,
New Delhi-110003
Dated: 16th July, 2013

To,

The General Manager
M/s Madhya Pradesh State Mining Corp. Ltd
Paryavas Bhawan, Block No. 1
Jail Road, Area Hills,
Bhopal - 462011

Sub.: Bicharpur underground coalmine project (0.5 MTPA normative and 0.75 MTPA Peak in an area of 500 ha) of M/s Madhya Pradesh State Mining Corp. Ltd. located in Sohagpur Coalfield dist. Shahdol, M.P. - Environment Clearance – reg.

This is with reference to letter no. Geo/2010-2011/207 dated 24.09.2010 with the application for Terms of Reference (TOR) and this Ministry's letter dated 23.12.2010 granting TOR. Reference is also invited to the letter no. Geo/2012-13/106 dated 24.08.2012 for environmental clearance on the above-mentioned subject.

2. The Ministry of Environment & Forests has considered the application. The proposal was considered in the 59th Expert Appraisal Committee held on 6th -7th November, 2012, It is noted that the proposal is for grant of Environmental Clearance for Bicharpur underground coalmine project (0.5 MTPA normative and 0.75 MTPA Peak in an area of 500 ha) of M/s Madhya Pradesh State Mining Corp. Ltd. located in Sohagpur Coalfield dist. Shahdol, M.P.. The proponent has informed that:

- i) Coal block was allotted to the M.P. State Mining Corp. Ltd. (Lessee) who has entered into an Agreement with ACC for providing 0.5 MTPA of coal for its linked cement plant.
- ii) The underground coalmine project of 0.5 MTPA (normative) with a peak production of 0.75 MTPA in an ML area of 500ha will consists of 75.750 ha of protected forest, 35.061ha of revenue forest, and 319.457ha of agricultural land. The land belongs to villages of Kalyanpur, Senduri, Bicharpur and Shahdol.
- iii) The entire block is coal-bearing land. The proponent proposed to acquire 15.39 ha of land of which 4.83 ha will be within lease area and 10.56 ha will be adjacent land outside lease for the colony is non-coal bearing.
- iv) The underground mining will be by mechanized Bord & Pillar method with caving. Mechanization will be done by introducing two sets of continuous miners with shuttle cars and Multi Roof Bolters.
- v) The coal grade is C to G and average grade would be E.
- vi) The ultimate depth of mining will be 270 m. The strike of beds are E-W with the dip varying from 10 - 40. There are four coal seams in Bicharpur block viz. I, II, III (III A

and III B) and IV are present in ascending order and are intersected. The seam thickness ranges from 0.15 m to 6.05 m. The gross Geological Reserves has been estimated to be 56.20 MT and the net extractable reserves would be 49.58 MT. The mineable reserve has been calculated to be 29.12 MT only three seams would be worked. While the seams would be partially extracted, the upper seam would be left un-extracted so that there will be no surface subsidence. Mine entries will be through two inclines and there will be one shaft for ventilation. The incline will be driven at Gradient of 1 in 5 or 11.50. The mining will intersect seam IV at 800 m and will be continued further to intersect the lowest Seam II at 1200 m. All three seams will be developed and extracted partially one after the other. There will be no drilling and blasting activities.

- vii) The mine has been planned to have no surface subsidence. The surface subsidence will be measured as prescribed by DGMS. The proponent indicated that due to planned method of work, it is expected that there will be no surface subsidence over 99% lease area. The mine will be closed with least damage to surface and the environment.
- viii) Total water requirement will be 130 KLPD for mine and 240 KLPD for the colony. The water levels would be 4.37 m bgl to 9.02 m bgl during pre-monsoon and 1.54 m bgl to 6.48 m bgl during post-monsoon.
- ix) Lotna nalla which flows from South to North divides the block in two parts. Two nalas, viz. Bagtha and Murna, flow from West and East respectively in northern part of the property, and join Lotnanala within block.
- x) It was informed that 40 mt area would be left on both sides of the nala. The drainage of the area will be controlled by Son river. Son river is in eastern part of Buffer Zone. A small part of 43.639 ha of the land will be extending over the northern part of the lease area of Shahdol which is already part of the Shahdol town.
- xi) The production will begin from the 4th year and rated capacity would be reached by the 5th year.
- xii) **Coal transportation:** The transportation of coal to the siding will be 3 km away by road through mechanically covered trucks and then by belt conveyor. Thereafter, the coal transportation will be by rail to the linked cement plant at a distance of 90km. The transportation of coal to siding will be done by using 30 T closed dumpers. Railway siding will be brought to near the mine site.
- xiii) **National Park / Sanctuary biosphere Reserve:** No National Park/Sanctuary biosphere Reserve etc are present within 50 km radius. Only one schedule-1 species i.e Peafowl or Peacock has been reported in area.
- xiv) **Forestry issues:** Most of the degraded forests would be the in lease area. The forest in buffer zone has reasonable flora and fauna. The process for diversion of the forest land has been initiated in 2011. The State Govt., vide Letter No. F-1/636/2011/10-11/3515, dated 13.12.2011 has forwarded the proposal for diversion of forest land to MoEF.
- xv) **Public Hearing:** The Public Hearing was held at site on 23.12.2011. The public raised issues such as pollution due to coal mining activities and raised concern over depletion of the level of ground water, drying up of ground water resources, location of siding, impact of mining on Shahdol town. There were apprehensions on the impacts of the vibrations due to blasting which might damage buildings and to the old temple in Shahdol. There were demands for employment to locals, supply of treated mine water for drinking purposes etc. The proponent assured to take necessary action on the issues raised during public hearing
- xvi) No R&R is involved.

- xvii) The Proponent proposed CSR budget of Rs.7.5 Crores (Capital) and annual revenue budget would be Rs1.875 crores. The environmental management plan budget would be Rs.79 Lakh (Capital) and Rs 12.50 Lakh (Revenue/annum) respectively.
- xviii) The life of the mine will be 41 years.
- xix) The mining plan has been approved vide Letter No.13016/24/2011-CA-I, dated 02 August 2012.
- xx) FC has been received vide letter no. 8-03/2012-FC dated 14th May, 2013.

3. The proposal was considered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) and recommended in its 59th meeting held on 6th -7th November, 2012 for granting Environmental Clearance. The Ministry of Environment & Forests has examined the application in accordance with the EIA Notification 2006 and under the provisions thereof, hereby accords environmental clearance for the above-mentioned **Bicharpur underground coalmine project (0.5 MTPA normative and 0.75 MTPA Peak in an area of 500 ha) of M/s Madhya Pradesh State Mining Corp. Ltd. located in Sohagpur Coalfield dist. Shahdol, M.P.** under the provisions of the Environmental Impact Assessment Notification, 2006 and amendments thereto and Circulars issued thereon and subject to the compliance of the following specific conditions, in addition to the general conditions:

A. Specific Conditions:

- i) The CSR expenditure (Capital) should be Rs 9.375 Crores upto 5th year and Rs 5/T of coal for revenue expenditure after completion of the project with suitable escalation factor every year.
- ii) Continuous monitoring equipment should be installed and continuous monitoring of subsidence and fire should also be carried out with mitigation measures.
- iii) Coal transport to railway siding should be by mechanically covered trucks and mechanized hopper/Silo loading in the wagon. As stated by the proponent, the Railway siding shall be brought to near the mine site.
- iv) The proponent should address the issues raised during public hearing.
- v) Lotna nalla which flows from South to North divides the block in two parts. 40 mt area would be left on both sides of the nala.
- vi) Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures shall be taken to avoid loss of life and material. Cracks shall be effectively plugged with ballast and clayey soil/suitable material.
- vii) If subsidence is found exceeding the permitted limits, then the landowners shall be adequately compensated with mutual agreement of the landowners.
- viii) Mining shall be carried out as per statuette at a safe distance from the river/nallah flowing adjacent to the lease boundary.
- ix) High root density tree species shall be selected and planted over areas likely to be affected by subsidence.
- x) Coal Extraction shall also be optimised in areas where agricultural production is continuing. Some pillars shall be left below the agricultural land. No depillaring & coal extraction should be carried out below habitation, H.T. Lines & beneath road, water bodies
- xi) Subsidence shall be monitored closely and if subsidence is found exceeding the permitted limits, then the landowners shall be adequately compensated with mutual agreement with the landowners.

- xii) 3-tier plantation should be developed 2 km stretch of road from the mine using native species
- xiii) Garland drains (size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump capacity shall be designed keeping 50% safety margin over an above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.
- xiv) Water sprinkling system shall be provided to check fugitive emissions from loading operations, conveyor system, haulage roads, transfer points, etc. Major approach roads shall be black topped and properly maintained.
- xv) A progressive afforestation plan shall be prepared and implemented over the mine lease area acquired and shall include areas under green belt development, areas along roads, infrastructure, along ML boundary and township etc, by planting native species in consultation with the local DFO/Agriculture Department.
- xvi) Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.
- xvii) Acid Water Treatment Plant, volume of water to be treated and disposal of brine should be provided.
- xviii) Mine discharge water outside the ML shall be monitored, particularly for TDS and treated to conform to prescribed levels before discharge into the natural environment.
- xix) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource, in case water table shows a declining trend. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- xx) Besides carrying out regular periodic health checkup of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health checkup for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmadabad within a period of one year and the results reported to this Ministry and to DGMS.
- xxi) The mining in the existing mines would be phased out after expiry of the current mining lease and after reclamation of mined over area. The operating mines may be analysed and monitored for compliance of conditions, having bearing with movement of wild life until such time they are closed/phased out
- xxii) Project specific CSR for an amount of Rs5/Tonne of coal production should be provided for the activities under CSR undertaken for the neighboring villages shall be for not less than Rs 10 per tonne of coal and the progress made thereon shall be uploaded on the company annually on the company website. Monitoring of the impacts of activities under CSR shall be carried out periodically.
- xxiii) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.
- xxiv) Corporate Environment Responsibility:
 - a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.

- c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.
- d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

B. General Conditions:

- (i) The Project Proponent shall implement all the commitments made in the EAC and also in their submissions.
- (ii) No change in technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.
- (iii) No change in the calendar plan including quantum of mineral coal and waste being produced shall be made.
- (iv) Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, in RSPM etc. shall be carried out at least once in six months.
- (v) Data on ambient air quality (PM₁₀, PM_{2.5}, SO₂ and NO_x and heavy metals such as Hg, As, Ni, Cr, etc) and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhopal and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognised under the EP Rules, 1986 shall be furnished as part of the compliance report.
- (vi) Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.
- (vii) Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, and treated so as to conform to the standards including for heavy metals before discharge prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.
- (viii) Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of the mineral shall be covered with tarpaulins and optimally loaded.
- (ix) Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analysed through a laboratory recognised under EP Rules, 1986.
- (x) Monitoring of outlet points should be carried out and records of same should be maintained and submitted to the Regional Office of the MOEF as part of the Compliance Report.
- (xi) Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.

- (xii) A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.
 - (xiii) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhopal.
 - (xiv) The Project authorities shall 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 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 the website of the ministry of Environment & Forests at <http://envfor.nic.in>
 - (xv) A copy of the environmental clearance letter shall be marked to concerned Panchayat/Zila Parishad, Municipal Corporation or Urban Local Body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on the company's website.
 - (xvi) A copy of the clearance letter shall be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.
 - (xvii) The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) and critical pollutants such as PM₁₀, PM_{2.5}, SO₂ and NO_x (ambient and stack if any) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.
 - (xviii) The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the MOEF, the respective Zonal offices of CPCB and the SPCB.
 - (xix) The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.
 - (xx) The environmental statement for each financial year ending 31st March in Form-V 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 uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MOEF by E-mail.
4. The Ministry or any other competent authority may stipulate any further condition for environmental protection.
 5. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.
 6. 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. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.

(Dr. Manoranjan Hota)
Director

Copy to:

1. Secretary, Ministry of Coal, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Madhya Pradesh, Bhopal
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, E-2/240 Arera Colony, Bhopal 462016.
4. Chairman, Madhya Pradesh State Pollution Control Board, Area Colony, Bhopal-462016.
5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
7. District Collector, Shahdol, Madhya Pradesh
8. Monitoring File 9. Guard File 10. Record File 11. Notice Board

(Dr. Manoranjan Hota)
Director