

Compliance Report:

Subject:- Tular and Manakudayan Limestone Mining Project by M/s Madras Cements Ltd, Perambalur Dist - reg

Reference :- MoEF.CI.Lt.No. J-11015/446/2007-IA.II (M) dt: 15.5.2007.

<u>A. Specific conditions</u>	
i. Top soil should be stacked properly with adequate measures at earmarked site. It should be used for reclamation of mined out area.	From the inception of mining about 1.078 Mil.T of top soil generated was temporarily dumped in the earmarked place on the Eastern and North eastern side of the lease over an area of 3.51 ha. Major part this has been utilized for development of green belt, avenue plantation etc. Once the mineral is exhausted Reclamation and Rehabilitation will be started in a phased manner and the remaining top soil will be used for spreading over the reclaimed area and afforested as submitted by the project authorities.
ii. OB dumps should be stacked in earmarked dumpsite(s) and properly designed keeping in view characteristics of over burden. Dumps should not be kept active for longer period. The over all slope of the dumps should not exceed 28 degree. The pit area shall be reclaimed by backfilling with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests on six monthly basis.	Over burden materials are being dumped in the earmarked area on the Eastern and North eastern side of the lease area spread over an extent of 7.99. The dump height and slope are maintained with terracing of 10 mts & Slope angle not exceeding about 28°. The inactive slopes of the dump are stabilized by planting 4000 saplings. Once the mineral is exhausted Reclamation and Rehabilitation will be started in a phased manner as submitted by project authorities.
iii. Garland drains shall be constructed to arrest silt and sediments flow from soil, and mineral dumps. The water so collected shall be utilized for watering the mine area, roads, green belt development etc. The drain shall be regularly desilted particularly after monsoon and maintained properly.	The Garland drain of size (2672 X 8 X 2.5) meter is formed for both mine pit and mineral dump and the water collected is utilized for dust suppression and green belt development. Both Garland drain and sump are desilted at regular intervals. Gradient of 1:20 is maintained for the garland drain. Mine floor has been maintained at

<p>Garland drain (size, gradient and length) shall be constructed for both mine pit and for waste dump 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 corner of the garland drains and desilted at regular intervals.</p>	<p>proper gradient to collect water in the sump. The sump capacity is designed to allow settling of silt materials.</p>
<p>iv. No drilling and blasting shall be involved.</p>	<p>Mining is carried by Surface miner and hence no drilling & blasting is involved..</p>
<p>v. The void left shall be converted into water body and development into pisciculture. The company shall organize a fishermen cooperative society by involving the local villagers. The revenue generated through pisciculture shall be shared among the members of the society.</p>	<p>Compliance is agreed upon. As submitted by the project authorities at the end of conceptual period about 22.69 ha will be left as water reservoir which will be utilized for Pisciculture. The company shall organize a fishermen cooperative society after the reservoir is created.</p>
<p>vi. Plantation shall be raised in an area of 24.66 ha including green belt of adequate width by planting the native species around the ML area, roads, OB dump sites etc. in consultation with the local DFO/ Agriculture Department. The density of the trees shall be around 2500 plants per ha. The company shall involve local people especially women self help group. The company shall plant local fruit bearing species by involving local people especially women with the help of self help group.</p>	<p>Green belt has been developed around the ML periphery, along the haul roads and also in the OB dumps by planting the native species in consultation with local DFO/Agricultural department. So far around 9450 nos of saplings have been planted covering an area of 5.21 Ha. Proper care is being taken for survival of the saplings. Overall survival rate is 85%. Further plantation is in progress.</p>
<p>vii. The company shall plant local fruit bearing species by involving local people especially women with the help of self help group.</p>	<p>Company has appointed qualified Horticulturalist and are involving local people to plant and raise the fruit bearing species.</p>

<p>viii. The project authority shall implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central ground Water Board.</p>	<p>A recharge pit of size 100 X 40 X 3.5 meter has been constructed to augment ground water resources in the area. Project authorities are being advised to consult CGWB for their opinion and expert suggestion also as per the MOEF condition.</p>
<p>ix. Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year – pre-monsoon (April – May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to MOEF, Central Ground Water Authority and Regional Director Central Ground Water Board.</p>	<p>Regular monitoring of ground water table and quality being carried out. A net work of 4 existing bore wells in and around working mine blocks have been identified and periodical monitoring of ground water level is being done for 4 seasons/ Annum. The water quality is being monitored in 6 bore wells. One piezometer has been installed in the mine area for monitoring. The study report is being submitted to MOEF and Central Ground Water Board Every half yearly period.</p>
<p>x. Prior permission from the competent authority shall be obtained for drawl of ground water, if any.</p>	<p>As per the Public works department GO.(Ms).No.52 dated 02.03.2012 the Sendurai taluk, where the mines belongs, fall in safe zone with respect to categorization of ground water resource. The water drawn is used for domestic purpose only and hence specific permission of competent authority has not been obtained as per project authorities.</p>
<p>xi. Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of minerals. The vehicles shall be covered with a tarpaulin and shall not be overloaded.</p>	<p>Vehicles are maintained and monitored for emission control. The vehicles are not overloaded and tarpaulin is used for covering as per project authorities. Emission certificate from the competent authority has been obtained for the transportation vehicles. Emission test certificates shows that vehicular emissions are in conformity with the norms.</p>
<p>xii. 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.</p>	<p>Compliance is agreed upon.</p>

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.

No change was observed.

ii. No change in the calendar plan including excavation, quantum of limestone and waste should be made.

No change on higher side was observed.

iii. Conservation measures for protection of flora and fauna in the core & buffer zone shall be drawn up in consultation with the local forest and wildlife department.

Compliance is agreed upon.

iv. Ambient air quality – monitoring stations should be established in the core zone as well as the buffer zone for RPM, SPM, SO₂, NO_x and CO monitoring. Location of the stations should be decided based on the metrological data topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board

10 Ambient Air Quality monitoring stations have been set up in core and buffer zone. The location of the above stations are based on meteorological data topographical features and environmentally and ecologically sensitive considerations as per project authorities. Monthly monitoring is being carried out. Monitoring reports shows that the parameters monitored are well within the norms stipulated.

v. Data on ambient air quality (RPM, SPM, SO₂ and NO_x) should be regularly submitted to the Ministry including its Regional office located at Bangalore and the State Pollution Control Board/ Central Pollution Control Board once in six months.

Ambient Air Quality data is being submitted regularly to the Regional Office, Bangalore once in six months and to State Pollution Control Boards once in a month.

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) should be provided and properly maintained.

Fugitive dust emission from all the sources is being controlled and monitored regularly. Haul roads, crushers, etc are water sprayed utilizing 10KLD water tankers. Both sides of haul road plantation is being maintained.

vii. Measures shall be taken for control of noise levels below 85 dB in the work environment. Workers engaged in

HEMM noise is reduced by means of effective periodical and preventive maintenance system. Acoustic enclosures are provided for the operators in all the equipment. Noise levels are

<p>operations of HEMM, etc shall be provided with ear plug/muffs.</p> <p>viii. Industrial waste water (workshop and waste 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.</p> <p>ix. 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.</p> <p>x. 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.</p> <p>xi. 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.</p> <p>xii. The project authorities shall inform to the Regional office located at Bangalore regarding date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.</p> <p>xiii. 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</p>	<p>being monitored periodically Monitoring reports shows that the noise levels are within the limits.</p> <p>ETP with Oil, grease traps and settling tank is provided in the mines workshop to treat the industrial effluent.</p> <p>Personal Protective Equipments are provided. Training on safety and health aspects have been provided in the vocational training centre.</p> <p>The Occupational health surveillance program is being conducted for the workers periodically. An occupational health centre headed by occupational health physician is run by the company. Periodical medical examinations are conducted as per the Mines Act and records maintained.</p> <p>Environmental cell is functioning under the unit head. One Environmental Engineer is posted at Corporate office to monitor and coordinate the Environmental activity. The organizational chart is submitted by the project authorities.</p> <p>As submitted by the project authority the finance is arranged through internal accruals and the dates of commencement is 4.7.2007.</p> <p>As per the EMP plan fund provision for capital and recurring expenditure towards environmental measures are provided. Details are provided. Please also see point No.9 of Part -I</p>
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<p>at Bangalore.</p> <p>xv. The Regional Office of this Ministry located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should provide a set of filled – in questionnaire and EIA/ EMP report to them and extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data /information/monitoring reports.</p> <p>xvi. A copy of clearance letter will be marked to the concerned panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.</p> <p>xvii. State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry center and Collectors office/ Tashildars Office for 30 days.</p> <p>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 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 & Forests at http://envfor.nic.in and a copy of the same shall be forwarded to the Regional office of this ministry located at Bangalore.</p>	<p>Co operation extended and documents/information submitted.</p> <p>As submitted by project authorities no suggestion either from Panchayat or from local NGO was received. Hence copy of EC is marked to anybody.</p> <p>Reportedly complied with.</p> <p>Advertised in the Daily Thanthi News paper Tamil Edition on 26.5.2007 and Hindu English News paper dated 1.6.2007. Copies submitted.</p>
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 (Dr. A. B. Harapanahalli)
 Adviser