Compliance Report on Conditions Issued by MOEF on Periathirukonam Limestone Mines (ML – I) vide Lr. No. J.11015/244/2005-IA-II(M) dated 28.10.05

S.No	Conditions	Compliance
A	**Specific Conditions**	
(i)	Prior approval of the CGWA shall be taken for mining below water table.	Approval from the CGWA is obtained.
(ii)	Top soil should be stacked properly with proper slope at ear-marked site(s) with adequate measures and should be used for greenbelt development.	Topsoil mined is being used over the backfilled area above which plantations are being developed.
(iii)	OB should be stacked at earmarked dumpsite only on temporary basis. Garland drains will be provided around the excavations to prevent storm water from catchment area to come in contact with freshly excavated areas. Toe drains will be provided all along the toe of the dump to arrest any soil erosion. Loose material slopes will be planted by making contour trenches at 2m intervals to check soil erosion.	Overburden / Limestone Reject stacked separately. Height and Slopes of the dump were maintained as per the norms. Toe drains are formed at the toe of the dump to arrest soil erosion. Plantation is also done on the slope of the dumps
(iv)	Check dams and siltation ponds of appropriate size should be constructed wherever required to arrest silt and sediment flows within the lease area. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted and maintained. Garland drain (size, gradient & length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains.	Garland Drains are formed around the dumps to arrest the silt. All the water collected inside the pit is channelized to the sump. The sump is designed in such a way that safety margin over the previous rainfall data. The rainwater & seepage water collected in the mine sump is allowed to settle in the sump. Hence the mine sump acts as a settling tank. The water collected inside the pit is used for haul roads/greenbelt development
(v)	Drills should be wet operated or with dust extractors.	Water Mist Dust Suppression system is provided in all the drilling equipment

		and wet drilling is being practiced
(vi)	Controlled blasting should be practiced and only during daytime. The mitigative measures for control of ground vibrations to arrest the fly rocks and boulders should be implemented.	Blasting is carried out with Milli – Second Delay Detonators to reduce the noise and ground vibrations. Blasting will not be carried out during the night time.
(vii)	Crusher should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from crushing operations, haulage roads, transfer points, etc.	Crusher is situated at the plant site located at 32 Kms away from the mines. The crusher is operated with bag filters to arrest the fugitive dust emissions from crushing operations, haulage roads, transfer points etc.,
(viii)	Water sprinkling arrangements to control the fugitive dust generation from the haulage roads and to the crusher.	Water sprinkling on haul roads is done regularly to suppress the dust.
(ix)	Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral ore. The vehicles should be covered with tarpaulin and should not be overloaded.	Proper periodical maintenance practice is being followed for equipments and tippers used in mining operations The transportation vehicles are loaded upto the body level and covered with tarpaulin during the transport.
(x)	Progressive Mine Closure Plan shall be implemented to backfill and reclaim an area of 22.50 ha. The higher benches of the balance excavated void/mine pit of an area of 29.50 ha. which is not being backfilled and is being converted into a water reservoir, shall be terraced and plantation done to stabilize the slopes. Peripheral fencing shall be done along the excavated area.	The mined out area is backfilled in a phased manner as per the approved mining plan. Till date about 14.62 ha is backfilled and plantations are developed over that. Backfilling will be carried out as per approved mining plan. At the end of mine life, the remaining portion of the mined out area will be converted into a water storage reservoir. Fencing will be around the excavated area.
(xi)	Plantation should be developed in the lease by planting the native species around the ML boundary, topsoil dump (0.665 ha.), waste dumps (3 ha.) along the roads (2.1 ha) and undisturbed area of 3.0 ha. in consultation with the local DFO/Agriculture department. The density of the trees should be around	Plantation developed all along the ML boundary and roads.

	2000 plants per hectare.	
(xii)	A final mine closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years prior to closure of mine for approval of the ministry.	Final mine closure Plan along with details of Corpus Fund will be submitted to the Ministry of Environment & Forests 5 years prior to closure of mine for approval of the ministry.
(xiii)	Consent to operate should be obtained from State Pollution Control Board expanding mining activities.	Consent to Operate obtained from State Pollution Control Board.
B	**General Conditions**	
(i)	No change in technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	Mechanised method of Mining is followed and there is no change in mining technology.
(ii)	No change in the calendar plan including excavation, quantum of limestone, waste / OB dumps should be made.	The quantity of limestone is restricted as per the plan.
(iii)	Ambient air quality-monitoring stations should be established in the core zone as well as buffer zone for SPM and RPM monitoring. Location of the ambient air quality stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and the frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Ambient Air quality readings are taken from the stations already established in the core zone and buffer zone as per our REIA/EMP approved by your office. The monitoring is carried out Fortnightly and the records are being maintained.
(iv)	Data on air quality should be regularly submitted to the Ministry including its Regional Office at Bangalore and the State Pollution Control Board / Central Pollution Control Board once in six months.	The season wise data on ambient air quality collected are submitted to the MoEF, Regional Office at Bangalore and the State Pollution Control Board once in six months
(v)	Adequate measures for control of fugitive emissions should be undertaken such as water spraying arrangements on haul roads, loading and unloading points and transportation of minerals, etc. Fugitive dust emissions from all	Drills are operated with water mist system for dust suppression. Vehicles carrying Limestone were covered with tarpaulin to prevent the dust from being airborne.

	sources should be regularly monitored and data recorded properly.	Water sprinkling is being done on haul roads regularly. Dust emission is monitored every fortnightly and data maintained.
(vi)	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.	Noise level is maintained well below 85 dBA. TNPCB monitoring periodically. Periodical monitoring is carried out by TNPCB on yearly basis. Persons are provided with PPE.
(vii)	Industrial waste water (workshop and wastewater 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 effluents from the Workshop.	The workshop water is properly collected in the up flow filters before discharge, in order to trap the oil and grease in the effluent. The water is then used for afforestation purposes.
(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 programme of the workers should be undertaken periodically and corrective measures taken, if required.	All our mine employees are provided with protective equipments such as dust mask, earplugs, shoes, helmets etc. Periodical Medical Examination is done for all our Mine employees regularly. Training on Safety and Health aspects is given at regular intervals for all our Mine Employees as per Mines Vocational training Rules 1966.
(ix)	The funds earmarked for environmental protection measures should be kept in separate account and not diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment & Forests.	The fund earmarked is spent for the Environmental Protection measures only.
(x)	The project authorities should inform to the Regional Office located at Bangalore regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land	The final approval of the project was informed to the MoEF, Regional Office at Bangalore. The fund required for the project was managed from the resources internally

	development work.	from the company. Hence the date of Financial Closure is not applicable.
(xi)	The Regional Office of this Ministry located at Bangalore shall monitor compliance of the stipulated environmental conditions. The project authorities should extend full co-operation to the officer(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.	–
(xii)	A copy of the clearance letter should be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.	A copy of the clearance letter was given to Panchayat as advised.
(xiii)	The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's/Tahsildar's office for 30 days.	–
(xiv)	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 7 days of issuance 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.	The Advertisement was given in two local newspapers as advised by you and the copy of the same was submitted to your Regional office.

C. Conditions stipulated by Tamilnadu Pollution Control Board

Conditions	Compliance
i. Wherever practicable, the mine water shall be utilized for irrigation of the plantations raised to stabilize the mine waste dumps.	The mine water is used for developing the plantations & suppression of dust.

ii.	Acid mine water, if any has to be treated by the unit, to satisfy the standards prescribed by the Tamilnadu Pollution Control Board.	As this is a Limestone mining project, this is not applicable.
iii.	The overburden and mine waste shall be used for reclamation, restoration and rehabilitation of the terrain without affecting the natural drainage and water regimes.	Carried out as envisaged in the approved mining plan.
iv.	Possibility of dumping the overburden and waste is available low lying areas accompanied by leveling and providing soil cover to utilize the land profitability may be explored.	No low-lying area is available in the nearby areas.
v.	If considered suitable, the overburden may be used as road metal or construction aggregates after crushing into proper size.	Over-burden is not suitable for use as road metal and also for construction.
vi.	Peripheral plantations shall be raised as wind belts to minimize the dry tailings being air borne.	Plantations developed all along the boundary of mining area.
vii.	Tailing dams for land disposal shall be constructed to their final heights before mining commences. All down stream slopes of tailing dams shall be vegetated as quickly as possible.	The water collected in the mine sump will be allowed to settle there itself. Only the clear water is being pumped out. Hence construction of a tailing dam does not arise.
viii.	Air Pollution control measure have to be provided for controlling gaseous pollutants (SO2, NOx and CO) to satisfy the standards prescribed by the Tamilnadu Pollution Control Board.	Gaseous pollutants are well within the limits as per standards prescribed by the TNPCB.
ix.	To prevent dust from being air-	The limestone carrying vehicles are

	borne transport equipment shall be leak proof and properly covered with tarpaulin.	properly covered with tarpaulin during the transport of limestone from mines to factory.
x.	The unit shall adopt water mist system, dust extraction system in the wagon driller so as to reduce the dust generation during drilling.	Wagon drills fitted with water mist system are used for drilling operation.
xi.	To minimize dust pollution, measures such as adoption of hoods at transfer point, proper dust suppression or dust extraction system for conveyors shall be introduced. The dust concentration shall satisfy the standards prescribed by the Tamilnadu Pollution Control Board.	There is no crusher installed at mines. The transport of limestone is not done through belt conveyors. The limestone carrying vehicles are properly covered with tarpaulin during the transport of limestone from mines to factory.
xii.	The unit shall make necessary arrangement for wetting of haulage roads to arrest the dust generated due to movement of vehicles.	Water sprinkling is regularly carried out with the help of water sprinkling tankers for wetting of haulage roads.
xiii.	The waste dumps, active mining area, sub grade dumps shall be sprinkled with water so that the air borne dust generation shall be minimal.	Water sprinkling is carried out regularly in the mining area and in the sub grade dumps to minimize the dust generation.
xiv.	Land use plan shall be prepared to encompass pre-operational and post operational phases of the mine based on general survey and collection of relevant information.	Land use plan as envisaged in the approved mining plan is followed.
xv.	Vegetational barriers shall be raised along the contours in the higher elevation areas for the prevention of soil erosion and for arresting mine wash.	Vegetational barriers are raised along the contours for the prevention of soil erosion
xvi.	It has to be ensured that waste shall be dumped within the lease area and it will not create any damages to adjacent property, agricultural fields, public utility, human settlement and shall not cause any barrier	Overburden material is being dumped within the leasehold area as per the approved mining plan.

	or obstruction to any water course.	
xvii.	The unit shall dump the excavated earth after studying the Engineering properties such as stability of slope, lateral earth pressure, etc., so as to avoid landslide.	The dumping of overburden is being carried out as per the approved mining plan & as per the Metalliferous Mines Regulations – 1961.
xviii.	Garland drains, shall be provided around the open cast excavation area, stacking, loading area and periphery of waste dumps so as to collect and discharge the in rush of water, during unprecedented heavy rain. The water collected in the garland drain will flow towards the settling tank.	The rainwater is collected in the mine sump, which acts as the settling tank. Only the clear water is being pumped out.
xix.	The unit shall provide collection sump at suitable location to collect the rainwater and seepage water and the same shall be used for irrigation.	The mine sump acts as a collection sump for the rainwater and seepage water. The water so collected is being used for development of plantations and also for the dust suppression purposes.
xx.	The unit shall not dump the solid waste in the ground water recharge/catchment area under any circumstances	Overburden will not be dumped in ground water recharge / catchment areas.
xxi.	The unit shall provide check dam across the final drain from the mine and peripheral bunds on the outer edge of abandoned benches that the solid shall not carried away by storm water	The rainwater & seepage water collected in the mine sump is allowed to settle in the sump. Hence the mine sump acts as a settling tank. Only the clear water is being pumped out.
xxii.	The banks of streams in the mining area shall be intensively vegetated to prevent the discharge of sediments into the streams.	There are no streams in the mining area. Hence not applicable.
xxiii.	The units shall collect the topsoil from the mining area and preserve it biologically and to utilize the same for plantation of trees during the reclamation programme.	The topsoil will be utilized for reclamation purposes as per the approved mining plan.

xxiv.	The unit shall use leak proof containers for the storage and transportation of oil/grease/ workshop waste so as to prevent the spillage in the mining area.	Leak proof containers are used for transportation of oil / grease as suggested.
xxv.	The unit shall ensure that the mining activity shall not affect the habitation and villages situated nearby and no blasting shall be carried out.	There are no habitations and villages around the mining area. Blasting is carried out with Milli – Second Delay Detonators and Non-electric Shock tubes which reduces noise and ground vibrations.
xxvi.	The unit shall follow the safety and precautionary measures while carrying out blasting operations and it should be done under the direct supervision of well-qualified blaster.	All safety and precautionary measures as per the Metalliferous Mines Regulations – 1961 being followed. The blasting is carried out under the direct supervision of a well-qualified blaster. The whole of blasting operation will be under the charge of a Mine Foreman who possess the Foreman certificate & Asst. Mines Manager who possess the Second Class Mines Manager Certificate of Competency issued by Director General of Mines Safety
xxvii.	All the loose debris, stones, fine dust shall be cleared from blasting area before blasting. Sentries shall be posted on all side of the mining area, with necessary communication facilities.	Suggested steps are being followed in site.
xxviii.	As the unit proposes blasting technology for mining, it has to be ensured that use of millisecond delay detonation, proper steaming, to ensure complete detonation using of adequate booster or using of sharp drill bits for drilling holes, drills with flushing system etc., will reduce ground vibration thereby avoiding adverse effect on the environment around the mining area.	Suggested steps are being followed in site.
xxix.	The unit shall not carry out any secondary blasting, therefore huge boulders shall be broke by deploying terminator or	No secondary blasting is carried out. Boulders are broken by deploying Rock Breakers.

	breakers	
xxx.	Stack of adequate height shall be provided for Diesel Generators if any and the emission let out shall satisfy Ambient Air Quality standards prescribed by the Board	Stack of sufficient height is provided.
xxxi.	The unit shall carry out the technological and biological reclamation works in the mined area as per the reclamation programme arrived in the EIA study report so as to develop self-sustaining eco-system.	The reclamation is carried out as per the approved mining plan and the EIA study report.
xxxii.	To avoid landslides, slope shall be planted with adequate trees or other soil binding vegetation.	Plantation is developed in the dumps.
xxxiii.	The unit shall treat the sewage and wastewater from canteen in a full fledged treatment system to satisfy the standards prescribed by the Board and to utilize the same for green belt development	Not applicable, since no canteen in mines.
xxxiv.	The wastewater generated from the workshop shall be collected separately and it shall be treated through up flow filter to separate the oil and grease.	The wastewater from workshop is treated in the up flow filter, which in turn is being used for development of plantations.
xxxv.	The unit shall ensure that noise generated from the mining operation and other allied activity shall satisfy the ambient noise level standards prescribed by the Board.	Noise level being maintained well within the limit. Periodical monitoring is done by TNPCB on yearly basis.
xxxvi.	The unit shall provide suitable storm water network with necessary gradient in the mining area in the dumpsite to drain storm water to collection pit during monsoon period.	The mine sump acts as a settling tank from which only the clear water is being pumped out.
xxxvii.	Diversion of water course would also have an effect on flora and fauna resulting in ecological imbalance to some extent. The measures proposed	There is no plan for diversion of any watercourse in the area.

	for changing the water course shall ensure the rehabilitation of flora / fauna.	
xxxviii.	The unit shall establish continuous ambient air quality monitoring stations preferably in the predominant wind directions in consultation with the Board to collect base line data as well as to assess the adequacy and operational conditions of air pollution control measures installed.	Ambient air quality monitoring stations are fixed in consultation with SPCB and monitoring is being done regularly.
xxxix.	Periodical monitoring shall be done by the unit to ensure the compliance with effluent standards, ambient air quality standards and ground water table in monitoring wells.	Periodical monitoring is being carried out and records are being maintatined.
xl.	The unit has to approach the Board for issue of consent by enclosing the Environmental Clearance issued by the Ministry of Environment and Forests, Government of India.	Consent to Operate is obtained and renewed regularly.
xli.	The unit shall provide infrastructure facilities like land, building, equipment and maintenance to the health sub-centers in the vicinity of the unit	Required infrastructure facilities are being developed and Medical camps are being organized in and around villages periodically.
xlii.	The reclaimed mined area of the unit shall be developed as a green belt with trees having a thick canopy cover. The number of trees planted should be at the rate of 2000 trees / hectare. The species, which are found locally and those, which are capable of colonizing the degraded areas, should be preferred.	Plantations are developed over the backfilled areas and Green belt is developed all along the boundary of mining area.
xliii.	The NOC is issued without prejudice to the right of Tamilnadu Pollution Control Board to collect consent fees for this NOC order at the rates to be	Ok.

	revised by the Government of Tamil Nadu.	
xliv.	The unit must provide Rain Water Harvesting facilities within the premises so as to increase the recharging of ground water in that area.	Rainwater harvesting ponds are already formed in the afforestation area.
xlv.	The unit shall maintain good house keeping	Good housekeeping practices are being followed.