

REPORT ON CHECK INSPECTION OF PERIATHIRUKONAM LIMESTONE MINE (ML -II) OF DALMIA CEMENT BHARAT LIMITED IN ARIYALUR DISTRICT OF TAMILNADU. [PREPARED IN THE FORMAT, PRESCRIBED VIDE CCOM'S LETTER NO. 11013/35/MP/MISC/89-CCOM (Vol. III)]

Name and designation of inspecting officer : SHRI G.C.SETHI, Regional Controller of Mines
Date of Inspection : 14.02.2023

1. General information of the mine :
 (i) Name of the mine : Periathirukonam Limestone Mine (ML -II)
 (ii) Owner : M/s. Dalmia Cement Bharat Limited
 (iii) Nominated owner : T. Venkatesan
 (iv) Mining Engineer : S.Vinay
 (v) Agent : K.Vinayagamurthi
 (vi) Mine Manager : D.Johnson
 (vii) Lease area : 44.705 Ha
 (viii) Location : Ariyalur TK & District
 (ix) Lease period : 27.01.2011 to 26.01.2036
 (x) Date of Expiry : 26.01.2036
 (xi) Date of approval of Mining Plan : TN/PBR/MP/LST/1553/SZ, Dt: 20.07.2004
 (xii) Date of approval of Review of Mining Plan : TN/ALR/LST/ MMP – 2086 MDS, Dt: 07.02.2022
 (xiii) Period of Mining Plan/ Review of Mining Plan : 2020-21 to 2025- 26
 (xiv) Production (Year 2021-22) : 698800

2. Brief description of the mine:

(a) A brief description of the mine covering location, geology, problems associated with mining of the deposit etc.

(1) Location:

Name of the Mine	Periathirukonam Limestone Mines (ML – II)
GO & Date of Grant of Lease	Re No:14812/MM4/2003 , Dated: 25.05.2005
Name of the Lease Holder	M/s Dalmia Cement Bharat Ltd, Dalmiapuram, Trichy - 621651
Postal address	Periathirukonam Village, Idayathankudi Post, Ariyalur TK & District, Pincode: 621705
Nearest villages	Idayathankudi,
Nearest Railway station	Ariyalur Railway Station
Nearest police station	Keelapalur
Nearest Airport	Tiruchirapalli

(2) Geology:

Topography: The ML area is a vast flat and plain terrain having an elevation of 37 m above MSL. The lowest elevation within the lease is 36 m above MSL. It is gently sloping terrain sloping from west to Eastern direction.

General Geology of the Area

The limestone deposit of the mining lease area is of sedimentary origin and is placed in the middle Ariyalur stage of the Upper Cretaceous formations of the Indian Stratigraphy, which was formed, in Marine Transgression environment.

The rocks in these region form part of the marine sedimentary formation of cretaceous age and referred to Kallankurichi formation of Ariyalur stage. The Kallankurichi formation is overlain by Nallamedu formation and underlain by Sillakkudi formation. The limestone is of fairly good quality as they carry numerous lamelli branch shells and formanifer skeletons.

The following geological sequence can be made out in this area.

Age and Stage	: Rock Type
Recent and quarternary	: Alluvium and black clayey soil
-----Unconformity-----	
Cretaceous period	
Ariyalur Group	
(Kallankurichi formation)	: Pure limestone with marl layers
	: Green Siltstone and Conglomerates
Archaen	: Amphibole gneiss

The lowest beds namely green siltstone and conglomerate have been reported only in boreholes and occur below the limestone. Physically there are two varieties of limestone. The harder type is full of lamellibranch shells and is cemented by hard calcareous material. The other type is softer, more porous rich in foramnifer shells and can be termed as 'Marl'. The limestone formations consist of alternate layers of harder shell limestone and the softer marly limestone. The thickness of limestone formations ranges from 5 mtrs. to 25 mtrs.

Local Geology

The limestone deposit in the lease area is striking in the North West to South East direction and dipping towards North East / East direction ranging from 5⁰ to 10⁰. The exploration data reveals that the thickness of the overburden as well as the limestone increases from the Southwest to Northeast directions. The limestone deposit is covered by topsoil-black cotton soil over a thickness of 1m to 2m. Below the topsoil the limestone deposit is covered by overburden-black clay or sandstone over a thickness of 5m to 25m. The limestone is highly fossiliferous and cemented together by a fine matrix of mud and sand.

(3) Problems associated with mining of the deposit etc. – Nil

(b) Description on deployment of mining machinery

Sl. No.	Machineries deployed	Capacity	Number of units	In use	Idle	Percentage of utilization	Brief description	Remarks
1	2	3	4	5	6	7	8	9
1	Dipper Shovels	Nil	-	-	-	-	-	-
2	Back Hoes	1.2 Cum	1	1	0	80%	Sany	
		1.8 Cum	1	1	0	80%	Kobelco	
		3 Tons	1	1	0	80%	Kobelco	Breaker
3	Front End Loader	Nil	-	-	-	-	-	-
4	Water Sprinkler	12K Lts	1	1	0	90%		
5	Dumpers/Tippers	18 CuM	15	14	1	80%		
6	Drills / Blast Holes	169 Hp	1	1	0	70%		115 mm
7	Bull Dozers	Nil	-	-	-	-	-	-
8	Motor Graders	Nil	-	-	-	-	-	-
9	Crushers	Nil	-	-	-	-	-	-
10	Cranes	Nil	-	-	-	-	-	-
11	Air Compressor	200 Cum/Min	1	1	0	70%	-	-

3. Implementation of Mining Plan or Review of Mining Plan:

Sl.No.	Proposal in the approved Mining Plan or Scheme of Mining (period from 2018-19 to 2022-23)	Observations regarding implementation of proposals given in approved Mining Plan or Review of Mining Plan.		Remarks/Reason for deviation
1	2	3		4
(1) CONSERVATION OF MINERALS				
		Proposed	Actual	2021 -22
(a)	Exploration	Nil	5	
(b)	Utilization of sub-grade mineral	Nil	Nil	Nil
(c)	Any other proposal for monitoring	Nil	Nil	Nil
(2) SCIENTIFIC MINING				
(a)	Mine Development and method of mining	746241 tons	698800 tons	Nil
(b)	Handling of Waste/ sub-grade material	468158 cum	402447 cum	Nil
(c)	Area reclamation & restoration	2.44 hect	0.94 hect	Nil
(d)	Any other proposal for monitoring	Nil	Nil	Nil
(3) PROTECTION OF ENVIRONMENT				
(a)	Afforestation	1600	2600	Nil
(b)	Quality of air	Air Quality standards within the limits.		Nil
(c)	Quality of Water	Water Quality standards within the limits.		Nil
(d)	Noise level	Noise level standards within the limits.		Nil
(e)	Vibration	Nil	Nil	Nil
(f)	Any other proposal for monitoring.	Nil	Nil	Nil

4. History of Violations after approval of Mining Plan or Scheme of Mining: 2020-21

SL No.	Date of Inspection	Name of inspecting officer	Violations of MCDR, 1988 observed and pointed out	Rectification of violations	Remarks
1	2	3	4	5	6
1	18.07.2022	Mr. Matiul Islam	Regarding Backfilling	Compiled on 30.08.2022	

5. Socio-Economic Development Plan (2021 -22):

Sl. No.	Proposed Action Plan towards socio-Economic Development	Expenditure proposed (In Rs. Lakh)	Expenditure Incurred (In Rs. Lakh)	Remarks
1	2	3	4	5
(1)	General Development in the area			
	(i) Housing	Nil	0	
	(ii) Water Supply	Nil	44,706.60	Deeping of village pond Thamarikulam
	(iii) Sanitation	Nil	11,967.99	School and hospitals
	(iv) Health safety and Medical Facilities	Nil	356,951.71	Monthly medical camp for villagers
(2)	Education and Training	Nil	41,192.66	Digital Educational bus for villagers
(3)	Employment to local inhabitants	Nil	5001549	Security Guards, electricians, operators
(4)	Public Transportation and communication	Nil	93,713.30	Bus for market
(5)	Recreation and other sports activities	Nil	2,450.58	Local sports, tournaments and temple celebrations
(6)	Expenditure for environment management	Nil	2921811	Plantations and maintenances.
(7)	Other	Nil		
Total			8474342.84	

6. Observations/ remarks on the earlier inspection carried out by sub-ordinate officer(s) with specific thrust on systematic and scientific mining, mineral conservation and environmental protection and other sensitive/important aspects pertaining to the mine area or surroundings (CRZ/ Western Ghats/ Wildlife Sanctuaries etc.):

1) Name of inspecting officer: Shri. Matiul Islam, ACOM

2) Date and Type of inspection: MCDR & Star Rating Inspection – 18.07.2022

3) Observations/ Remarks w.r.t. the inspection carried out by the sub-ordinate officer(s) and shortfalls in the inspection report, if any, thereof: Nil

Name of the Officer: **G.C.Sethi**
Designation: **Regional Controller of Mines**