

**REPORT ON CHECK INSPECTION OF PERIATHIRUKONAM LIMESTONE MINE (ML-2) OF M/s. DALMIA CEMENT BHARAT LIMITED IN ARIYALUR DISTRICT OF TAMILNADU STATE. [PREPARED IN THE FORMAT, PRESCRIBED VIDE CCOM'S LETTER NO.11013/35/MP/MISC/89-CCOM ( Vol.III)]**

Name and designation of inspecting officer : **V. Jaya Krishana Babu**  
**Controller of Mines, Bangalore**

Date of Inspection : 11.07.2024

**1. General information of the mine :**

- i) Name of mine : **Periathirukonam Limestone Mine – ML -2**
- ii) Owner : M/s Dalmia Cement Bharat Limited
- iii) Nominated owner : T. Venkatesan
- iv) Mining Engineer : S. Santhosh Kumar
- v) Agent : K. Vinayagamurthi
- vi) Mine Manager : C.P. Hariprasad
- vii) Lease area : Non Forest area : 44.705 Ha  
Forest area: 0 Ha  
**Total: 44.705 Ha**
- viii) Location : Village: Periathirukonam & Alanthuriyarkattalai  
District: Ariyalur  
State: Tamilnadu
- ix) Lease period : 25 Years
- x) Date of Expiry : 26.01.2036
- xi) Date of approval of mining plan: TN/PBR/MP/Lst-1553-SZ Dt: 20.07.2004  
(2010-11 to 2014-15)
- xii) Date of approval of scheme : TN/ALR/LST/MMP-2105.MDS Dt: 14.02.2024  
(2023-24 to 2024-25)
- xiii) Period of Mining Plan/ : (2023-24 to 2024-25)  
Scheme of Mining R.C.No:14812
- xiv) Production (Year 2023 to 24) : **476992 MT**
- Mineral rejects generated : Nil**
- Dispatches : 697640 MT**

**2. Brief Description of the mine :**

- a) **A brief description of the mine covering location, geology, problems Associated with mining of the deposit etc. may be given.**

**Location:**

Name of the Mine	Periathirukonam Limestone Mine ML-2
GO & Date of Grant of Lease	RC no: 14812 Dt: 25.05.2005, Grant of Mining Lease: 27.01.2011
Name of the Lease Holder	M/s Dalmia Cement Bharat Limited
Postal address	Dalmiapuram, Trichy district, Tamilnadu - 621651
Nearest villages	Periathirukonam & Alanthuriyarkattalai
Nearest Railway station	Ariyalur Railway Station
Nearest police station	Ariyalur
Nearest Airport	Tiruchirappalli

### Geology:

The rocks in this area form part of the marine sedimentary formation of cretaceous age, referable to Ariyalur Group. A characteristic bed of limestone and marls given the name of "Kallankurichi stage" by recent works of G.S.I. and ONGC is the most extensive and economically important member of Ariyalur Group. The limestone is of fairly good quality as they carry numerous lamella branch shells and foraminifer skeletons.

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

Age and Group	: Rock Type	↑
Recent and quaternary	: Alluvium and black clayey soil	
-----unconformity-----		
Cretaceous	:	
Ariyalur Group (Kallankurichi Stage)	: Pure limestone with marl layers : Green siltstone and conglomerates	
Archaean	: 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 lamellibranches shells and is cemented by hard calcareous material. The other type is softer, more porous rich in foraminifera 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 mtr. to 10 mtr.

The Kallankurichi Limestone of Ariyalur Group occur as a long sinuous belt, a few kilometers to the east of Ariyalur town, extending in North-South direction with low dips of 5 to 10 to the east over a length of about 22 kms. With a width ranging from 400 to 1000 metres. Near Srinivasapuram and Periyagalur and near Reddipalayam the trend of the limestone swings towards east west with dips of 10 to 15 to the south.

The variations in the strike, dip, thickness and depth of occurrence have been attributed to

01. The un-even surface of the deposition

02. Changes of currents in the shallow basin of deposition and  
03. Erosion of limestone after deposition.

In the Periathirukonam area the limestone is highly fossiliferous and cemented together by a fine matrix of mud and sand; the basement rock is sand stone which is light grey to grey in color.

The limestone is striking in North West to South East direction and dipping towards North East / East direction ranging from  $5^0$  to  $10^0$ .

**b) Description on deployment of mining machinery given in the following format:**

Sl.No	Machineries Deployed	Capacity	No. of units	In use	Ideal	Percentage of utilization	Brief Description	Remarks
1	2	3	4	5	6	7	8	9
1	Back Hoe	2cbm	2	2	0	80%	L&T KOMATSU	As per the proposals in the approved Mining Plan utilization as reported.
2	Back Hoe	1.2cbm	1	1	0	80%		
3	Tipper	18cbm	5	5	0	80%		
4	Pumps (Non-Elec)	112hp	2	2	0	90%		

**3. Implementation of Mining Plan or Scheme of Mining:**

Sl.No.	Proposal in the approved Mining Plan or Modified Mining Plan (period from 2023 to 2024)	Observations regarding implementation of proposals given in approved Mining Plan or Scheme of Mining		Remarks
		Proposed	Actual	
<b>1</b>	<b>CONSERVATION OF MINERALS</b>			
a)	<b>Exploration:</b>	Nil	Nil	Lease area fully explored under G1 level in the past.
b)	<b>Utilization of sub-grade mineral:</b>	Nil	Nil	No sub-grade is generated. Sub grade benches are submerged under water logged area
c)	<b>Any other proposal for monitoring –</b>	Nil	Nil	

<b>2</b>	<b>SCIENTIFIC MINING</b>			
a)	<b>Mine Development and method of mining- Production:</b>	476992	698200	68% excess production is made against the proposed /approved production. Violation pointed out.
b)	<b>Handling of Waste/ subgrade material -</b>	52706 m3 waste generation proposed.	173764 m3 waste generated.	330% excess Waste is removed of proposed / approved quantity which is a gross violation. Violation issued.
c)	<b>Area reclamation &amp; rehabilitation:</b>	8.48 Ha	Total Area Reclaimed – 8.25 ha	Reclamation and Rehabilitation in progress.
<b>3</b>	<b>PROTECTION OF ENVIRONMENT</b>			
a)	<b>Afforestation:</b>	1200 Saplings	3511 Saplings	As per AR-23-24 submitted and appears to be correct.
b)	<b>Quality of air –</b>	Air Quality standards within the limits.		M/s. Interstellar Testing Center Lab, Chennai is engaged for monitoring Environmental data on a Quarterly basis. Verified the Environmental Reports during inspection and found to be in order.
c)	<b>Quality of water –</b>	Water Quality standards within the limits.		
d)	<b>Noise level –</b>	Noise level standards within the limits.		
e)	<b>Vibration –.</b>	–		
f)	<b>Any other proposal for monitoring</b>	Nil		

#### 4. History of Violations after approval of Mining Plan or Scheme of Mining:

Sl. No	Date of inspection	Name of inspecting officer	Violations of MCDR, 88 observed and pointed out	Rectification of violations	Remarks
1	2	3	4	5	6
1	22.12.2023	Sri. D. Chandrasekhar Reddy Assistant Mining Engineer	Non maintenance of height of the Bench	The height of the bench is corrected.	Violation is complied with.

#### 5. Socio-Economic Development Plan:

Sl. No.	Proposed Action Plan towards socio Economic Development	Expenditure proposed (In Rs, Lakh)	Expenditure incurred in (in Rs, Lakh)	Remarks
1	General Development in the area	-	-	-
	i) Housing	-	-	-
	ii) Water Supply	-	0.92	The Mine Management has reportedly spent on Construction of water tank at Chittithirukonam village.
	iii) Sanitation	-	-	-
	iv Health, Safety and Medical Facilities	-	0.12	The Mine Management has reportedly assisted in conducting medical camp at Edayathankudi Village.
2	Education and Training	-	-	-
3	Employment to local inhabitants	-	35.3	The Mine Management Has Provided livelihood 37 persons from local villages by engaging in various activities of the mine.
4	Public Transportation and communication	-	-	-
5	Recreation and other sports activities	-	6.02	The Mine Management has reportedly supported in Conducting Sports events during Pongal festival in surrounding 5 villages
6	Expenditure for environment management	The Mine Management Has Spent 22 lacs (including labour) on developing 35 acres of Bamboo plantations which is verified and appears to be correct.		
7	Other Old age pension	-	-	-
<b>8</b>	<b>Total</b>		<b>64.36</b>	

Sd/-  
(V. J. K. Babu)  
Controller of Mines (South Zone)  
Indian Bureau of Mines, Bengaluru.