

**INDIAN BUREAU OF MINES
MINERALS DEVELOPMENT AND REGULATION DIVISION
Mining Plan Modification Report
Chennai Regional Office**

Mine file No: TN/ALR/LST-33.MDS

Mine code: 38TMN38048

- (i) Name of the Inspecting Officer and ID No. : **(K08) G.SORNADURAI KANNAN**
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine Official with Designation : Thiru.K.Sankar, QP & Thiru. RaviKumar, DGM-Mines
- (iv) Date of Inspection : 02/08/2024
- (v) Prev. Inspection date :

PART-I: GENERAL INFORMATION

1.	(a)	Mine Name	:	PERIYATHIRUKONAM
	(b)	Registration No.	:	IBM/170/2011
	(C)	Category	:	A Fully Mechanised
	(d)	Type of Working	:	Opencast
	(e)	Postal address	:	PERIYATHIRUKONAM
		State	:	TAMIL NADU
		District	:	ARIYALUR
		Village	:	PERIYATHIRUKONAM
		Taluka	:	ARIYALUR
		Post office	:	PERIYATHIRUKONAM
		Pin Code	:	621704
		FAX No.	:	914329-250011
		E-mail	:	ariyalur@chettinadcement.com
		Phone	:	914329-250009
	(f)	Police Station	:	Ariyalur
	(g)	First opening date	:	30/01/2020
	(h)	Weekly day of rest	:	SUN
2.		Address for correspondence	:	Chettinad Cement Corp Pvt Ltd Ariyalur Works, Keelapalur Post Ariyalur Taluk & Distt - 621704
3.	(a)	Lease Number	:	
	(b)	Lease area	:	32.295 Hectares
	(C)	Period of lease	:	50 Years
	(d)	Date of Expiry	:	11/01/2067
4.		Mineral Worked	:	Limestone Main

5. Name and Address of the

Lessee : M/s CHETTINAD CEMENT CORPN. LTD
4TH FLOOR, RANI SEETHAI
HALL BUILDING 603,
ANNA SALAI, CHENNAI, TAMILNADU
Phone: 044 - 8272727
FAX : 044 - 8241416

Owner : Thiru. Mohan Muthukaruppan,
M/s. Chettinad Cements Corp (P) Ltd
603 Annasalai, Chennai,
TAMIL NADU
Phone: 044 28292727
FAX : 044 28291558

Agent : Thiru. R.P.MUTHIAH
M/s. Chettinad Cements Corp (P) Ltd
Keelapalur, Ariyalur-621707
TAMIL NADU

Mining Engineer

Name : T. Balagokul, Full Time
Qualification : B.E., (Mining Engineering)
Appointment/ Termination date : 10.05.2023

Geologist

Name : S.Srinivasan,
Qualification : M.Sc, (Geology)
Appointment/ Termination date : 18.05.2022

Manager

Name : E.Ganesamoorthy, Full Time
Qualification : B.E., (Mining Engineering)
Appointment/ Termination date : 10.05.2023

5. Date of approval of Mining Plan/Scheme of Mining : Fresh under rule 22 MCR1960 09/01/2017
MP modif under 17(3) MCR 2016 13/11/2019
MP review under 17(1) MCR 2016 15/12/2020

PART - II: OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Sl. No	Item	Proposals	Actual Work	Remarks
A. EXPLORATION:-				
1a	Backlog of Previous Year	No Boreholes has been proposed during 2023-2024.	No Boreholes has drilled during 2023-2024.	No Proposal has been given for 2023-2024
1b	Exploration Over Lease area for Geological Axis 1 or 2	No additional exploration was proposed during 2023-2024 in the lease area for Geological axis - 1.	No additional exploration was carried out in the lease area for Geological axis - 1 during 2023-2024.	Entire lease area 32.295 hectares are under G-1 category.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No Proposal for exploration during 2023-2024.	No Exploration during 2023-2024.	So far 22 boreholes have been drilled with 793 meterage in the lease upto 2023-2024 By State Govt of Tamilnadu.
1d	Balance area to be explored to bring Geological axis 1 or 2	Exploration was not proposed during 2023-2024.	No Exploration has been carried out during 2023-2024.	Entire area has been explored under G-1 category with 100m X 100m grid interval.
1e	Balance reserves as on 01/04/2023	Limestone as on 01.04.2024 Proved Mineral Reserves (111) = 754601 tons Pre-Feasibility Mineral Resources (221) = 1629329 tons Marl as on 01.04.2024 Proved Mineral Reserves (111) = 240352 tons Pre-Feasibility Mineral Resources (221) = 164571 tons	Limestone as on 01.04.2024 Proved Mineral Reserves (111) = 754953 tons Pre-Feasibility Mineral Resources (221) = 1629329 tons Marl as on 01.04.2024 Proved Mineral Reserves (111) = 273452 tons Pre-Feasibility Mineral Resources (221) = 164571 tons	The available grade of Limestone in this lease area is Cement Grade.
1f	General remarks of inspecting officer on geology, exploration etc.	It is part of Cretaceous formations	Limestone deposits are of sedimentary origin of marine transgressional series of Maestrichtian age.	Shell Limestone is yellowish colour with predominant well preserved Gryphaea shells and highly fossiliferous.

Sl. No	Item	Proposals	Actual Work	Remarks
B. DEVELOPMENT:-				
2a	Location of development w.r.t. lease area	During 2023-2024, it is proposed to work in existing pit-1 between Section line BB' to DD'.	Development is carried out as per proposal.	Mining plan is Modified during 2023-2024.

2b	Separate benches in topsoil, overburden and mineral	Topsoil – 1 bench, OB - 2 bench & Minerals – 3 Benches proposed in Lease.	OB & Mineral benches are formed as per proposal.	Mining plan is Modified during 2023-2024.
2c	Stripping ratio or ore to OB ratio	1 : 1.88	1 : 1.56	Due to less production quantity the Stripping Ratio is increased.
2d	Quantity of topsoil generation in m3	There is proposal of 39342 cu.m of Topsoil generation during 2023-2024	38757 cu.m of topsoil has generated during 2023-2024.	Mining plan is Modified during 2023-2024.
2e	Quantity of overburden generation in m3	There is proposal of 132598 cu.m of OB generation during 2023-2024	132509 cu.m of OB has been generated during 2023-2024.	Nil
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	During 2023-2024, it is proposed to work in existing pit-1 between Section line BB' to DD'.	132509 cu.m of OB has been generated against 132598 cu.m during 2023-2024.	Mining plan is Modified during 2023-2024.

Sl. No	Item	Proposals	Actual Work	Remarks
C. EXPLOITATION:-				
3a	Number of Pit Proposed for Production	During 2023-2024, it is proposed to work in existing pit-1 between Section line BB' to DD'.	Productions are not carried out as per proposal in Lease.	Violation issued under Rule 11(1) of MCDR.
3b	Quantity of ROM mineral production proposed	The total target of Limestone production proposed was 293772 tons and Marl is 110582 tons during 2023- 2024.	Achieved Limestone Production is 293420 tons and Marl is 77482 tons during 2023- 2024.	Violation issued under Rule 11(1) of MCDR.
3c	Recovery of Sailable/ Usable Mineral from ROM Production	90% Recovery	90% Recovery	Nil
3d	Quantity of mineral reject generation	There is proposal of Mineral Reject generation during 2023- 2024 is 44927 tons.	37090 tons of Mineral Reject generated during 2023- 2024.	Mining plan is Modified during 2023-2024.
3e	Grade of mineral reject generation and threshold value declared	High silica is considered as mineral rejects.	High silica is considered as mineral rejects.	Nil
3f	Quantity of sub-grade mineral generation	No Sub Grade Generation	No Sub Grade Generation	Nil
3g	Grade of sub-grade mineral generation	There is No Generation of Subgrade Mineral	There is No Generation of Subgrade Mineral	Nil

3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised method	Mechanised method	Entire ROM is useable and sent to crusher.
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No Beneficiation Study is Proposed	Nil	Outside the lease area beneficiation plant is present.
3j	Provision of drilling & blasting in mineral benches	No Drilling & Blasting are proposal.	Drilling & Blasting are not done.	Rock breakers are used for production.
3k	Provision of mining machineries in mineral benches	Excavators Tippers Rock Breakers Dozer	As per proposal the machineries are there during inspection.	Available machinery are shown in Annual Returns
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	In 2023-2024, Bench height of 5m was proposed in Mineral.	As per proposal benches are formed.	Nil
3m	Total area covered under excavation/pits	9.58 hect area is proposed for Pit during 2023-2024	7.39 hect areas are under Pit only.	Due to less production of marl, proposed area is not achieved.
3n	Ore to OB ratio for the pit/ mine during the year	1 : 1.88	1 : 1.56	Due to less production quantity the Stripping Ratio is increased.
3o	Total area put in use under different heads at the end of year	Land use Pattern as on 01.04.2024. Mines = 9.58 hect Dump = 5.47 hect	Land use Pattern as on 01.04.2024. Mines = 7.86 hect Dump = 6.520 hect	Violation issued under Rule 11(1) of MCDR.
3p	Production of ROM mineral during last five-year period, as applicable	2023-2024 = 449283 tons 2022-2023 = 770725 tons 2021-2022 = 1004008 tons 2020-2021 = 478094 tons 2019-2020 = 3998973 tons	2023-2024 = 370902 tons 2022-2023 = 354833 tons 2021-2022 = 426371 tons 2020-2021 = 496555 tons 2019-2020 = 61100 tons	Mining plan is Modified during 2023-2024. ROM is inclusion of both Limestone & Marl.
3q	General remarks of inspecting officer on method of mining etc.	During 2023-2024, it is proposed to work in existing pit-1 between Section line BB' to DD'.	Achieved ROM Production is 370902 tons during 2023-2024 against proposal of 449283 tons.	Mining plan is Modified during 2023-2024.

Sl. No	Item	Proposals	Actual Work	Remarks
D. SOLID WASTE MANAGEMENT - DUMPING:-				
4a	Separate Dumping of Topsoil, OB and Mineral Rejects	There is proposal for dumping of OB on southern side of lease area during 2023-2024.	As per proposal the dumping was not carried out during 2023-2024.	Mining plan is Modified for not achieving proposal.
4b	Location of Topsoil, OB and Mineral Rejects Dumps	There is proposal for dumping on southern side of lease area during 2023-2024.	As per proposal the dumping was not carried out during 2023-2024.	Mining plan is Modified for not achieving proposal.

4c	Number of Dumps within Lease & Outside Lease area	Lease area = 4 Non Lease area = Nil	Lease area = 5 Non Lease area = Nil	Violation issued under Rule 11(1) of MCDR for not Re-handling the dump
4d	Location of Dumps, within Ultimate Pit Limit (Rule-16)	Outside UPL	Outside UPL	Nil
4e	Number of Active & Alive Dumps	Active Dump= 4 Alive Dump = Nil	Active Dump= 5 Alive Dump = Nil	Violation issued under Rule 11(1) of MCDR for not Re-handling the dump
4f	No of Dead Dumps	No Proposal	Nil	Nil
4g	No of Dumps Established	No Dumps have been established.	No Dumps have been established.	Nil
4h	Whether Retaining Wall or Garland drain along Dumps are there	No Proposal	Nil	Nil
4i	Length of Retaining Wall or Garland drain along Dumps	No Proposal	Nil	Nil
4j	No of Settling tanks	No proposal	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management	There is proposal for dumping of OB on southern side of lease area during 2023-2024.	As per proposal the dumping was not carried out during 2023-2024.	Mining plan is Modified for not achieving proposal.

Sl. No	Item	Proposals	Actual Work	Remarks
E. SOLID WASTE MANAGEMENT - BACKFILLING:-				
5a	Status of part or full extraction of mineral from mined out area before starting backfilling	Backfilling has been proposed in the lease area during 2023-2024	Backfilling has done partly during 2023-2024	Mining plan is Modified for not achieving proposal.
5b	Area under backfilling of mined out area	1.71 hectares proposed for backfilling during 2023-2024	1.05 hectares has been Backfilled.	Mining plan is Modified for not achieving proposal.
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Rehabilitation use of topsoil	Rehabilitation use of topsoil	Topsoil has been dumped separately for using in backfilled area.
5d	Total area fully reclaimed and rehabilitated	No Proposal during 2023-2024.	Nil	No proposal for fully reclaimed and rehabilitated during 2023-2024.
5e	General remarks of inspecting officer on backfilling, reclamation etc	Backfilling has been proposed in the lease area during 2023-2024	Backfilling has done partly during 2023-2024	Mining plan is Modified for not achieving proposal.

Sl. No	Item	Proposals	Actual Work	Remarks
F. PROGRESSIVE MINE CLOSURE PLAN:-				
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 23E(2). Details should be given in the format as given in Annexure-20.	It should be on or before 1 st July every year.	Submitted for the year 2023-2024.	Nil
6b	Management of worked/ mined out benches i) Area available for rehabilitation (ha) ii) Afforestation done (ha) iii) No. of saplings planted during the year iv) Cumulative no. of plants v) Any other specific method of rehabilitation vi) Cost incurred on watch & care during the year	i) No Proposal ii) No Proposal iii) No Proposal iv) No Proposal v) No Proposal vi) No Proposal	i) Nil ii) Nil iii) Nil iv) Nil v) Nil vi) Nil	Mining plan is Modified for not achieving proposal.
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/ tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	i) No Proposal ii) No Proposal iii) No Proposal iv) No Proposal v) No Proposal	i) Nil ii) Nil iii) Nil iv) Nil v) Nil	Mining plan is Modified for not achieving proposal.
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	i) 2000 saplings proposed in safety zone 2023-2024. ii) Proposed 1.0 hect in safety zone for 2023-2024. iii) Green Belt development proposed on safety barrier for 2023-2024.	i) Total 2799 saplings has achieved during 2023-2024 along safety zone. ii) 1.15 hect achieved in safety zone area during 2023-2024. iii) Plantation has been done as per proposal along the safety barrier for 2023-2024.	Cumulatively 18471 saplings have been planted within & outside lease area.

6e	Compliance of Environmental monitoring (core zone & buffer zone)	Bi-Annually Survey	Environment monitoring is carried out through Government as well as private agency.	Lessee is conducting Environmental monitoring and all are within permissible limit
6f	General remarks of inspecting officer on PMCP compliance & progressive closure operations	2000 saplings proposed in 1.0 hectares along the safety zone for 2023-2024.	Total 2799 saplings has achieved in 1.15 hectares of safety zone during 2023-2024.	Cumulatively 18471 saplings have been planted within & outside lease area.

Sl. No	Item	Proposals	Actual Work	Remarks
G. MINERAL CONSERVATION:-				
7a	ROM mineral dispatch or grade wise sorting within lease area	The total target of Limestone & Marl ROM production proposed was 449283 tons during 2023-2024.	Achieved Limestone & Marl ROM Production is 370902 tons during 2023- 2024.	Mining plan is Modified for not achieving proposal.
7b	Method of Grade-wise mineral sorting i.e. manual or mechanical	There is no proposal for grade wise mineral sorting in the lease area.	Entire ROM is useable and marl is blended with high grade limestone.	The available grade of Limestone in this lease area is cement grade.
7c	Different grade of mineral sorted out at mines	The Limestone of the lease area varies from 35% CaO.	The Limestone of the lease area is 35% CaO	Grade of Marl Mineral is CaO +25% and SiO2 +18%
7d	Any beneficiation process at mines	Crushing & Screening process at outside the lease area	Inside the lease area there is no beneficiation process.	Entire ROM is useable and Marl is blended with high grade limestone.
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	The available grade of Limestone in this lease area is cement grade.	Achieved ROM Production is 370902 tons during 2023-2024 against proposal of 449283 tons.	Entire ROM is useable and Marl is blended with high grade limestone to get the desired plant feed materials. Mining plan is Modified for not achieving proposal.

Sl. No	Item	Proposals	Actual Work	Remarks
H. ENVIRONMENT:-				
8a	Separate removal and utilization of topsoil	There is proposal of 39342 cu.m of Topsoil generation during 2023-2024	38757 cu.m of topsoil has generated during 2023-2024.	Mining plan is Modified during 2023-2024.

8b	Concurrent use or storage of topsoil	Concurrent use	Concurrent use	Mining plan is Modified for not achieving proposal.
8c	Separate dumps for overburden, waste rock, rejects and fines	There is proposal for dumping of OB on southern side of lease area during 2023-2024.	As per proposal the dumping was not carried out during 2023-2024.	Mining plan is Modified for not achieving proposal.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Backfilling has been proposed in the lease area during 2023-2024	Backfilling has done partly during 2023-2024	Mining plan is Modified for not achieving proposal.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Backfilling has been proposed in the lease area during 2023-2024	Backfilling has done partly during 2023-2024	Mining plan is Modified for not achieving proposal.
8f	Baseline information on existence of plantation & additional plantation done	2000 saplings proposed in safety zone for 2023-2024.	Total 2799 saplings has achieved during 2023-2024 along safety zone.	Plantation has been done as per proposal along the safety barrier.
8g	Survival rate	No Proposal in the document.	80%	Plantation has been done as per proposal along the safety barrier.
8h	Water sprinkling on roads to control airborne dust	Yes, it is proposed for water sprinkling on haul roads.	Daily Water tanker is spraying water on mines roads side to control airborne dust.	During Inspection, water sprinkling on mines roads has been noticed.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Scanty vegetation, bushes, neem are observed in lease area	There is no prominent river or stream running in this area.	Outside lease area, River, seasonal nalla is running.

Sl. No	Item	Comments	Remarks	
I. COMPLIANCE OF RULE-45:-				
9a	Status of Submission of Monthly & Annual Returns	MR Submitted up to = July 2024 AR Submitted up to = 2023-2024.	Returns are submitted within time limit. Both Annual & Monthly returns are submitted in online.	
Sl. No	Item	Details Given in A.R	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer, Geologist & Manager has shown.	During inspection Mining Engineer, Geologist is present.	Nil

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use Pattern as on 01.04.2024. Mines = 7.390 hect Reclaimed = 1.07 hect	Landuse Pattern is filled as per approved Mining Plan	Nil
9d	Scrutiny of Annual return on afforestation	Lessee has planted 2282 saplings during 2023-24.	Plantation has been done as per proposal along the safety zone.	Cumulatively 17554 saplings have been planted till date in inside lease area and 517 saplings outside lease area.
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Mineral Reject is included in the waste quantity	Nil	It is advised to show separately the Mineral reject dump & quantity.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Limestone stock as on 01.04.2024 ROM opening stock & closing stock = Nil Marl stock as on 01.04.2024 ROM opening stock & closing stock = Nil	Mine has produced 370902 tons of production during 2023-2024.	It is captive mine of M/s. Chettinad Cements Corporation Pvt Limited.
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Cost of Production & Ex. Mine price has shown	It is captive mine of M/s. Chettinad Cements Corporation Pvt Limited.	Nil
9h	Scrutiny of Annual return on fixed assets	Fixed Assets is given for group of mines.	Fixed Assets is filled	Nil
9k	Scrutiny of Annual return on mining machineries	Machineries details given	As available in field	Nil

Details of violations observed during current inspection and compliance position of earlier violation pointed out:-

Violation issued Rule 11(1)

G.S.Kannan
Senior Mining Geologist