

## INDIAN BUREAU OF MINES

## MINERAL DEVELOPMENT AND REGULATION DIVISION

## MCDR INSPECTION REPORT

## Chennai Regional Office

Mine file No. TN/ALR/LST-25.MDS		Mine Code: 38TMN38047
	Name of the inspecting officer designation	Matiul Islam Assistant Controller of Mines
	Date of inspection:	11.11.2024
	Accompanied mine official and designation	Shri.R.RaviKumar (DGM-Mines) & Shri. B.Vikram Pyus (Mines – Manager)
<b>PART-I: General Information</b>		
1	Name of the Mine	Sendurai Limestone Mine
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	21.92.5Ha(No Forest Land)
3	Mine code	170/38TMN38047
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/170/2011
5	Name of the lessee, Address, phone, email and fax number	Sendurai Limestone Mines M/s Chettinad Cement Corporation (P) Ltd, Trichy-Ariyalur Road, Kilapaluvur, Ariyalur – 621707 Ph No. 04329-250011 Email- arymines@chettinadcement.com Fax: 04329-250011
6	Village	Sendurai
7	Taluka/Mandal	Sendurai
8	District	Ariyalur
9	Pin code	621714
10	State	Tamil Nadu
11	Post office	Sendurai
12	Nearest police station	Sendurai
13	Nearest Railway station	Ariyalur
14	Date of Grant of Mining Lease	17.04.2015
15	Date of Execution	09.01.2017
16	Date of opening of Mine	19.07.2017
17	Date of first Renewal, if applicable and its period & expiry	NA
18	Date of second Renewal, if applicable and its period & expiry	NA
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	NA
20	Name of the Nominated Owner with Address, phone, email, fax number and Date of appointment	Shri. Mohan Muthukaruppan, M/s. Chettinad Cement Corpn (P) Ltd, 4th Floor, Sigappi Aachi Building,18/3 Rukmani Lakshipathy Road,Egmore,Chennai-08  01.04.2022  Ph No. 04329-250011 Email- arymines@chettinadcement.com
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri. R.P, Muthiah M/s. Chettinad Cement Corporation Private Ltd, 4 <sup>th</sup> Floor, Sigappi Aachi Building, 18/3, Rukmani Lakshmipathy Road, Egmore, Chennai -08  01.12.2022  Ph No. 04329-250011 Email- arymines@chettinadcement.com
22	Name of the Mines Manager with Address, phone, email,	Shri. B.Vikram Pyus

	fax number and date of appointment in mines	Chettinad Cement Corporation (P) Ltd, Trichy-Ariyalur Road Kilapaluvur, Ariyalur – 621707, Phone: 9788858198. vikrampyus.b@chettinadcement.com Appointment Date- 30.06.2017
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri. M. Sathish Kumar, B.E Mining Chettinad Cement Corporation (P) Ltd, Trichy-Ariyalur Road Kilapaluvur, Ariyalur – 621707, Phone: 9444448438 Appointment Date- 01.04.2021
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Shri. R.Ravikumar, MSc., Geology Chettinad Cement Corporation (P) Ltd, Trichy-Ariyalur Road Kilapaluvur, Ariyalur – 621707, Ph.No. 9788858243 Appointment Date- 09.09.2022
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Modified Mining Plan: TN/ALR/ /MP/LST/1782- SZ/1189.MDS Dt: 17.12.2012  Modified Mining Plan: TN/ALR/ /MP/LST/2031.MDS Dt: 13.07.2017  Review of Mining Plan: TN/ALR/LST/ROMP-1615.MDS Dated:15.12.2020
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Modified Mining Plan : TN/ALR/LST/MMP-2114.MDS Dated:28.03.2024
27	Mineral(s) granted in lease and proved for mining	Limestone & Marl
28	Method of Mining(Open cast, Underground)	Open cast
29	Category (Fully Mechanized, Others or Manual)	Fully Mechanized
30	Captive/Non Captive	Captive

**II - OBSERVATION AND COMMENTS OF INSPECTING OFFICER**

**Exploration**

S.N.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	11 Borehole with 165 m depth.	To Know the quality and reassess the quantity
1b	Exploration over lease area for Geological axis 1 or 2.	Nil	G1	Potentially mineralized area fully explored upto G1 level
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Nil	Sai Geo consultancy - Cost of Exploration RS - 247500	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Nil
1e	Balance reserves as on 01.04.2024 (111+121 Category)	Total - 7,73,992 T (Lst - 4,47,800 T Marl - 3,26,192 T)	Total - 5,22,483.36 T (Lst - 1,15,710.36 T Marl - 4,06,773.00 T)	Nil
1f	General comments of inspecting officer on geology, exploration etc.	-	-	Geology & Exploration of the lease were found satisfactory.

**Development**

S.N.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area (Ref With Grid)	N-1244800 to N-1245010 E-302350 to E-302700	N-1244735o N-1244960 E-302440 to E-302635	Nil
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Separate benches proposed in topsoil, OB & Mineral.	Separate benches maintained in topsoil, OB & Mineral.	Nil
2c	Stripping ratio or ore to OB ratio	1:0.13	1.0.22	Violations pointed for deviations from development and exploitation proposals
2d	Quantity of topsoil generation in m <sup>3</sup>	21,200	23,600	Violation pointed for deviation
2e	Quantity of overburden generation in m <sup>3</sup>	42,400	52410	Violation pointed for deviation
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	-	-	Violations pointed for deviations from development and exploitation proposals

**Exploitation**

S.N.	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	1	1	Nil
3b	Quantity of ROM mineral production proposed	Total - 3,27,600 T Lst- 2,84,400 T Marl- 43,200 T	Total - 2,43,338 T Lst- 2,00,159.12T Marl- 43,178.66 T	Violation pointed for deviation
3c	Recovery of salable / usable mineral from ROM production	100% 327600 Ts	100% 243338 Ts	Violation pointed for deviation
3d	Quantity of mineral reject generation	Nil	Nil	Nil
3e	Grade of mineral reject generation and threshold value declared	NA	NA	Nil

3f	Quantity of sub-grade mineral generation	Nil	Nil	Nil
3g	Grade of sub-grade mineral generation	NA	NA	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	Nil
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Nil	Nil	Nil
3j	Provision of drilling & blasting in mineral benches	No Drilling and Blasting proposed	No Drilling and Blasting carried out	Non-Conventional method of Mining using Rock Breakers
3k	Provision of mining machineries in mineral	Excavator, Breaker, Dozer, Tipper, & Water Sprinkler proposed	Excavator, Breaker, Dozer, Tipper, & Water Sprinkler deployed	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Top soil -2m Waste- 4m Lst -6m Marl -6m	Top soil -2m Waste- 4m Lst -6m Marl -6m	Suitable
3m	Total area covered under excavation/pits	12.705 Ha	6.268 Ha	Within proposed limits
3n	Ore to OB ratio for the pit/mine during the year	1:0.13	1.0.22	Violations pointed for deviations from development and exploitation proposals
3o	Total area put in use under different heads at the end of year	19.48 Ha	13.95 Ha	Within proposed limits
3p	Production of ROM mineral during last five-year period, as applicable	2019-20: Lst-230674, Marl - 97711 2020-21: Lst-230813, Marl - 98824 2021-22: Lst-269280, Marl - 56484 2022-23: Lst-266400, Marl - 57240 2023-24 Lst-284400, Marl - 43200	2019-20: Lst-230632.68, Marl - 97690.50 2020-21: Lst-230738.68, Marl - 98711.96 2021-22 Lst-196534.05, Marl - 45454.91 2022-23: Lst-188376, Marl - 49255 2023-24 Lst-200159.12, Marl - 43178.66	Within proposed limits
3q	General Remarks of inspecting officer on method of mining etc.	-	-	Violations pointed for deviations from development and exploitation proposals

#### Solid Waste Management-Dumping

S.N.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Topsoil-1 Over Burden-1	Top soil-1 Over Burden-1	No reject generated
4b	Location of topsoil, OB & mineral reject dumps(Ref to	TS Dump - N-1245025 to 1245125 E-302150 to	TS Dump - N-1245025 to 1245125 E-302150 to	Nil

	Grids)	302350	302350	
4c	Number of dumps within lease area and outside lease area	Within ML 2 Outside ML: Nil	Within ML: 2 Outside ML: Nil	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL	Outside UPL	Nil
4e	Number of active & alive dumps	Nil	Nil	Nil
4f	Number of dead dumps	1	1	Nil
4g	Number of dumps stabilized	1	1	Nil
4h	Whether Retaining wall or garland drain all along dumps are there	Garland drain proposed along dump periphery	Garland drain maintained along dump periphery	Nil
4i	Length of Retaining wall or garland drain all along dump	Garland drain - 253 m	Garland drain - 323m	Nil
4j	Number of settling ponds	1 (1200 cu.m)	1 (1200 cu.m)	Nil
4k	Specific comments of inspecting officer on waste dump management	-	-	Waste dump management was found satisfactory.

#### Solid Waste Management – Backfilling

S.N.	Item	Proposals	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Backfilling proposed after full extraction of mineral	Backfilling done after full extraction of mineral	Nil
5b	Area under backfilling of mined out area	4.5 Ha	3.03 Ha	Violation pointed for deviation
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Top Soil utilized for Afforestation purpose	Top Soil utilized for Afforestation purpose	Top soil used concurrently
5d	Total area fully reclaimed & rehabilitated	2.455 Ha	Total - 7.98 Ha; Reclaimed & rehabilitated - 2.992 Ha; Reclaimed - 4.988 Ha	Nil
5e	General Remarks of inspecting officer on backfilling, reclamation etc	-	-	Violation pointed for deviation from backfilling proposal

#### Progressive Mine Closure Plan

S.N.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly –Rule 23E(2)	Periodic submission proposed	Periodically submitted	Along with Annual Return
6b	Area available for rehabilitation (ha)	Nil	Nil	Nil
6c	Afforestation done (ha)	1.00 Ha	1.02 Ha	Nil
6d	No. of saplings planted during the year	2000	2550	
6e	Cumulative no. of plants	10000	15770	Nil
6f	Any other specific method of rehabilitation	Nil	Nil	Nil
6g	Cost incurred on watch & care during the year	75000	85000	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D)	45000 m <sup>2</sup>	30370 m <sup>2</sup>	Violation pointed for deviation
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Void filled by waste/tailings	4.5 Ha	3.03 Ha	Violation pointed for deviation

6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on the backfilled area	Nil	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v) Any other specific means	Nil	Nil	Nil
6m	Compliance of Rehabilitation of waste land within lease i) Afforestation	Nil	Nil	Nil
6n	Compliance of Rehabilitation of waste land within lease ii) Area rehabilitated (ha)	Nil	Nil	Nil
6o	Compliance of Rehabilitation of waste land within lease iii) Method of rehabilitation	Nil	Nil	Nil
6p	Compliance of Environmental monitoring (core zone & buffer zone)	Periodic Monitoring proposed	Periodically Monitored	All parameters within norms
6q	General remarks of inspecting officer on PMCP compliance & progressive closure operations	-	-	Violation pointed for deviation from backfilling proposal

#### Mineral Conservation

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	No Sorting proposed	No Sorting carried out	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	NA	NA	Nil
7c	Different grade of mineral sorted out at mines	NA	NA	Nil
7d	Any beneficiation process at mines	Nil	Nil	Nil
7e	General Remarks of inspecting officer on Mineral conservation & beneficiation issues	-	-	Entire ROM generated is consumed. No issues observed with mineral conservation. No beneficiation proposed or carried out.

#### Environment

S.N.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Proposed	Carried out	Nil
8b	Concurrent use or storage of topsoil	Yes, concurrent use proposed	Top soil used concurrently	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Top Soil -1 Over Burden-1	Overburden dump utilized for backfilling and topsoil dump utilized for recapping and afforestation.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Backfilling proposed	Backfilling carried out	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Backfilling proposed	Backfilling carried out	Nil
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	Tree Density : 2000 /ha Variety of Saplings	Cumulative Plantation 15770 No	Nil

		Planted 1.Pungan 2.Neem 3.Pelta 4.Pouvarasa 5.Illupai 6.Teak		
8g	Survival rate	Not specified	90%	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haul roads proposed.	Water sprinkling on haul roads carried out	Nil
8i	General Remarks of inspecting officer on aesthetic beauty in and around mines area	-	-	Aesthetic beauty in and around mines area found satisfactory

#### Compliance of Rule 45

S.N.	Item	Details GIVEN in A.R.	Observation of I/Officer	Remarks
9a	Status of submission of Monthly and Annual returns	Given	Submitted in time	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager Shri. B.Vikram Pyus Mining Engineer Shri. M.Sathish Kumar Geologist Shri. R.Ravikumar	Given in Part I, Sl 7-9.	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit area-6.268 Ha Reclaimed-7.980 Ha Waste disposal-0.000 Ha Buildings & Roads-0.100 Ha Green Belt-7.577 Ha	Given in Part I, Sl 12.	Nil
9d	Scrutiny of Annual return on Afforestation	Afforestation -2550 trees	Given in Part V, Sl 5	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Mineral Reject- Nil	Given in Part V, Sl 3	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM- 243337.78 T Stock - Nil	Given in Part VI, Sl 2 & 3(ii).	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex-mine Price and Cost of Price - Rs 283.56 per tonne	Given in Part VI, Sl 3(ii) & Part VII.	Nil
9h	Scrutiny of Annual return on fixed assets	GFA- Rs 91,64,10,541 /-	Given in Part II A	Nil
9i	Scrutiny of Annual return on mining machineries Name of the Machinery Capacity	Back Hoe      0.900 CUM      2 Back Hoe      0.900 CUM      2 Other HEM Machinery      120      1 Tipper      14 MT      5	Given in Part V, Sl 6	Nil

Details of violations observed during current inspection and compliance position of violations pointed out					
Violation observed			Show cause position		
Rule No.	Issued on	Compliance on	Rule No.	Issued on	Compliance on
11(1)	03/12/2024				

Date:

(Matiul Islam)

Indian Bureau of Mines