

**INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

MCDR inspection REPORT

Chennai regional office

Mine file No : TN/VOC/LST-7.MDS

Mine code : 38TMN15045

- (i) Name of the Inspecting : S011) SALIL SANDIP KUJUR
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Mr. Jagdesh-GM MINES
Official with
Designation
- (iv) Date of Inspection : 26-FEB-20
- (v) Prev.inspection date : 27-AUG-19

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : SIVALARPATTI
- (b) **Registration NO.** : IBM/638/2011
- (c) **Category** : A Mechanised
- (d) **Type of Working** : Opencast
- (e) **Postal address**
- State : TAMIL NADU
- District : THOOTHUKUDI (TUTICORIN)
- Village : SIVALARPATTI
- Taluka : VILATHIKULAM
- Post office : PUDUR
- Pin Code :
- FAX No. : 04562-256268
- E-mail : adminrn@madrascements.co.in
- Phone : 04562-256201, 201 & 203
- (f) **Police Station** : R R NAGAR
- (g) **First opening date** : 01-JUN-95
- (h) **Weekly day of rest** : SUN
2. **Address for correspondance** : SIVALARPATTI LST MINE
PUDUR POST
VIRUDUNAGAR
3. (a) **Lease Number** : TMN1203
- (b) **Lease area** : 150.11
- (c) **Period of lease** : 20
- (d) **Date of Expiry** : 21-MAY-15
4. **Mineral worked** : LIMESTONE Main

5. Name and Address of the

Lessee : MADRAS CEMENTS LIMITED
Auras Corporate Center Vth
Floor, 98 A Dr.Radha
Krishnan salai, Mylapore
CHENNAI CITY TAMIL NADU
Phone:044-28478666
FAX :044-28478676

Owner : P.R.Venketrama Raja
Ramasamiraja
Nagar, Virudhnagar, Chennai-
626204 VIRUDHUNAGAR TAMIL
NADU
Phone: 04562 256201 -
FAX : 04562 256268

Agent : S.Ramalingam
Ramasamiraja Nagar,
Virudhnagar Pin:626204
VIRUDHUNAGAR TAMIL NADU
Phone: 04562 256201 - 203
FAX : 04562 256268

Mining Engineer
Name : M.D.Massom Basha, Full Time
Qualification : B.E(Mining)
Appointment/ : 09-SEP-12
Termination date

Geologist
Name : L.Venkatarama Subramanian, Full Time
Qualification : M.Sc Geology
Appointment/ : 31-JUL-13
Termination date

Manager
Name : K. Nagendran
Qualification : BE.MINING
Appointment/ : 17-MAR-07
Termination date

6. Date of approval of Mining : Fresh under rule 22 MCR1960 23-SEP-89
Plan/Scheme of Mining Mining Scheme rule 12 MCDR1988 22-JAN-03
Modif.approved Mining Scheme 05-AUG-04
Mining Scheme rule 12 MCDR1988 31-JAN-07
Mining Scheme rule 12 MCDR1988 29-NOV-11
Modif.approved Mining Scheme 28-FEB-14
MP modif under MCR 1960 02-JUL-15
MP modif under MCR 1960 16-DEC-16

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	Nil
1b	Exploration over lease area for geological axis 1 or 2	66.32 Ha	66.32 Ha	Area fully explored upto G1 Level, since the deposit is metamorphic and vertically move downward with 70-80 degree inclination. hence the footwall side no further drilling is required. Further the lease has some small area/cart road/small width etc where mining is not possible
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Nil	Nil	ML Area explored by TRCL & GIEM
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Exploration is being carried out for proving of Limestone at Bottom level
1e	Balance reserve as on 01/04/20	6.07 Mil.Tons	6.07 Mil.Tons	Nil
1f	General remarks of inspecting officers on geology, exploration etc	-	-	Satisfactory

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	ML - 26.4 to 37 & ML-10.8 to 12.6	ML - 26.4 to 37 & ML-10.8 to 12.6 As per proposal	Mining has been carried out as per proposal

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Pit 1A-Benches OB-8,Limestone-1 Pit 2-Benches OB-8,Limestone-1	Pit 1A-Benches OB-8,Limestone-1 Pit 2-Benches OB-8,Limestone-1	Separate benches are maintained in OB and Mineral.
2c	Stripping ratio or ore to OB ratio	1 : 2.09	1 : 2.05	Almost nearer to the proposal
2d	Quantity of topsoil generation in m3	Nil	Nil	No proposal as per approved Mining Plan
2e	Quantity of overburden generation in m3	527617	494579	Almost comensurating as per proposal
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	-	-	Satisfactory

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2	2 (Pit 1A & 2)	As per the Proposal
3b	Quantity of ROM mineral production proposed	689998	688805	As per the Proposal
3c	Recovery of sailable/usable mineral from ROM production	90 %	90 %	Nil
3d	Quantity of mineral reject generation	Nil	Nil	ROM Limestone transported to Common Crushing Plant. No beneficiation activities involved within ML
3e	Grade of mineral rejects generation and threshold value declared.	<35 CaO	<35 CaO	Threshold value maintained.
3f	Quantity of sub grade mineral generation.	Nil	Nil	No subgrade mineral generation.

3g	Grade of sub grade mineral generation	Nil	Nil	No subgrade mineral generation.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized methods proposed.	Mechanized methods of mineral segregation/ beneficiation techniques adopted at crushing plant situated outside ML.	Mineral conservation is practiced.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal given.	No proposal during the plan period.	This mine is in working since 1995 and deposit is well established for its quality and grades.
3j	Provision of drilling and blasting in mineral benches	Deep hole drilling and blasting is proposed and blasting with delay detonators and explosives.	As per proposal	Nil
3k	Provision of mining machineries in mineral benches	Given Proposals	To do drilling & blasting in the working benches.	Adopted controlled Blasting as recommended by Anna University.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	9 m height benches proposed both in Ore and OB.	Benches maintained as per proposal.	Bench height and width suitable for mechanized method and machinery deployed.
3m	Total area covered under excavation/pits	48.70 Ha	48.70 Ha	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:2.09	1:2.05	Nearer to the proposal.

3o	Total area put in use under different heads at the end of year	100.11 Ha	100.11 Ha	Nil
			Area under mining 48.700 Storage of top soil 1.960 Overburden/dump 8.500 Mineral Storage - Infrastructure(Workshop / Building) 0.750 Roads 4.500 Railways - Green belt 32.600 Tailing pond - Effluent treatment plant - Mineral Separation plant - Town ship area - Others (Garland drains, settling Tank etc) 3.100 GRAND TOTAL 100.110 Unused area 50.000 Grand Total 150.110	
3p	Production of ROM mineral during the last five year period as applicable	2014- 15=5,19,075 2015- 16=6,89,763 2016- 17=6,89,999 2017- 18=6,89,997 2018- 19=6,89,998 2019- 20=6,89,995	2014-15=4,14,501 2015-16=6,54,931 2016-17=6,89,866 2017-18=6,89,750 2018-19=6,88,805 2019-20=6,27,575 (upto Jan'2020)	All production quantities nearer to the proposal.
3q	General remarks of inspecting officers on method of mining etc.	-	-	Satisfactory

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Existing Dump to be used	Dumping carried out separately on existing OB dump.	Nil

4b	Location of topsoil, OB and mineral reject dumps	OB Dump ML-25.5 to ML-34.5	OB Dump ML-25.5 to ML-34.5 Location: N 90 19' 25" E 780 08' 44"	Nil
4c	Number of dumps within lease area and outside of lease area	Inside ML-4 Nos Outside ML-5 Nos	Inside ML-4 Nos Outside ML-5 Nos	No Changes
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Yes	Yes within Ultimate Pit Limit	Yes. Maintained
4e	Number of active and alive dumps.	2	2	Nil
4f	Number of dead dumps.	3	3	Nil
4g	Number of dumps established.	2	2	Yes stabilized
4h	Whether Retaining wall or garland drain all along dumps are there.	yes 415 x 1 x 1	5 Nos of Garland Drains are maintained.	South Block: 1) 1300 m X 1.5 m X 1.0 m 2) 2200 m X 1.5 m X 1.0 m 3) 2900 m X 1.5 m X 1.0 m 4) 1800 m X 1.5 m X 1.0 m North Block: 1) 500 m X 1.5 m X 1.0 m Are Maintained
4i	Length of Retaining wall or garland drain all along dumps	2 No.of Garland Drains (Length-2698 m)	5 Nos of Garland Drains are maintained. (Length-8700 m)	South Block: 1) 1300 m X 1.5 m X 1.0 m 2) 2200 m X 1.5 m X 1.0 m 3) 2900 m X 1.5 m X 1.0 m 4) 1800 m X 1.5 m X 1.0 m North Block: 1) 500 m X 1.5 m X 1.0 m Are Maintained

4j	Number of settling ponds	5 Nos	5 Nos	South Block: No.1 : 140m x 78m x 2.5m No.2 : 100m x 88m x 3m No.2 : 100m x 88m x 3m North Block: No. 1 : 70m x 60m x 2.5m No. 2 : 40m x 20m x 2.5m Are made & maintained
4k	Specific comments of inspecting officer on waste dump management	-	-	Satisfactory

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Not Applicable	Not Applicable	Nil
5b	Area under backfilling of mined out area	Not Applicable	Not Applicable	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not Applicable	Not Applicable	Nil
5d	Total area fully reclaimed and rehabilitated	Not Applicable	Not Applicable	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Not Applicable	Not Applicable	Nil

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
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6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Periodically Submitted	Yes Submitted	As per proposal, the same has been submitted
6b	Area available for rehabilitation (ha) .	Nil	NA	No area is available for rehabilitaion
6c	afforestation done (ha).	Nil	NA	No area is available for afforestation. However, the lessee is planting saplings in old dumps.
6d	No. of saplings planted during the year	530	2800	As per plan
6e	Cumulative no .of plants	-	4500	The plantation was found satisfactory
6f	Any other method of rehabilitation	Nil	NA	Not Applicable
6g	Cost incurred on watch and care during the year	Nil	The lessee is hiring local tanker for watering of saplings	The lessee is hiring local tanker for watering of saplings
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Nil	NA	Since no area is available for backfilling, no reclamation or rehabilitation is in progress
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Nil	No area has been backfilled	Nil

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil	The mineral is not completely excavated. The water reservoir will be formed after complete exploitation of mineral.
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	NA	NA
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Nil	No waste land is available with lessee	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	No waste land is available with the lessee	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Nil	NA	NA
6p	Compliance of environmental monitoring (core zone and buffer zone)	Periodically Monitored	All the parameters are under permissible limit.	Environmental Monitoring Report Periodically submitted by the lessee to Indian Bureau of Mines.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	-	-	Satisfactory

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Nil	NA	No mineral sorting at pit level. Entire ROM is being transported to beneficiation plant located outside the ML area.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Nil	NA	Nil
7c	Different grade of mineral sorted out at mines.	Nil	NA	No segregation of mineral at mine head.
7d	Any beneficiation process at mines	Nil	NA	Beneficiation plant located outside ML Area
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	-	-	Satisfactory

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Nil	NA	Top soil is not utilized during the year 2018-2019
8b	Concurrent use or storage of topsoil	Nil	NA	Top Soil stacked separately
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	OB Dump ML- 25.5 to ML- 34.5 Location: N 90 19' 25" E 780 08' 44"	As per proposal	Separate dumps are provided as per approved Mining Plan
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Nil	NA	Not at this stage

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Nil	NA	Old dumps are being terraced for stabilization
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	530 Nos	2800 Nos	So far 37600 No. of Saplings Planted by covering 32.60 Ha upto Sep'2019.
8g	Survival rate	-	80%	Nil
8h	Water sprinkling on roads to control airborne dust	10 KL Water Tanker	As per Proposal	Water Tanker is being used for Dust Suppression
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	-	-	Satisfactory

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Submitted	Submitted	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	As per filed Annual Return	Shri.K.Saravanan (Mining Engineer), Shri.L.Venkatarama Subramanian (Geologist)	Present at site

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	48.700 Ha. Under current workings, 8.500 Ha. for waste diposal, 5.250 Ha for office etc, 87.660 Ha virgin and green belt area as per AR 2018-19.	Details are matching	Nil
9d	Scrutiny of Annual return on afforestation	0.33 Ha (530 Nos)	2.30 Ha (2800 Nos)	Neem, Pungai & Vagai
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	No mineral reject generated during the period under review.	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	688805.04 tonnes of ROM production reported as per 2018-19	688805.04 tonnes of ROM production reported as per 2018-19. Production reported during 2019-20 (upto Jan'2020) 6,27,575 tonnes.	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Details furnished. Ex-mine price and cost of production = Rs 532.42	It is captive mine, Ex-mine price and cost of production = Rs 532.42	Nil
9h	Scrutiny of Annual return on fixed assets	Rs.32323405 shown as fixed asset value in AR 2018-19.	The details given are reasonable. No additions in year 18-19.	Nil
9k	Scrutiny of Annual return on mining machineries	BACK HOE 0.900 CUM - 1, BACK HOE 1.100 CUM - 2, TIPPER 12.000 CUM -8 BLAST HOLE DRILL 115 MM - 1, AIR COMPRESSOR 400 CUM/min-1 & DOZER-1	Deployment of machinery found.	Nil

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

Violation observed		Show cause position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on

Date :

(SALIL SANDIP KUJUR)

Indian Bureau of Mines