

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

MCDR inspection REPORT

Chennai regional office

Mine file No : TN/ALR/LST-34.MDS

Mine code : 38TMN38054

- (i) Name of the Inspecting : 275) V.JAYA KRISHNA BABU
Officer and ID No.
- (ii) Designation : Controller of Mines
- (iii) Accompanying mine : Sri N. Jaya Bharata Reddy, General Manager (Mines)
Official with
Designation
- (iv) Date of Inspection : 05/09/2023
- (v) Prev.inspection date : 06/12/2022

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : PERIYATHIRUKONAM LST-74.81 HA.
- (b) **Registration NO.** : IBM/613/2011
- (c) **Category** : A Fully Mechanised
- (d) **Type of Working** : Opencast
- (e) **Postal address**
- State : TAMIL NADU
- District : ARIYALUR
- Village :
- Taluka :
- Post office :
- Pin Code :
- FAX No. :
- E-mail : dal_planthead@indiacements
- Phone : 04329-248201
- (f) **Police Station** : Sendurai
- (g) **First opening date** : 11/07/2018
- (h) **Weekly day of rest** : SUN
2. **Address for correspondance** : Cement nagarf post, Sendurai taluk,
Ariyalur district
Pin:621730
3. (a) **Lease Number** :
- (b) **Lease area** :
- (c) **Period of lease** :
- (d) **Date of Expiry** :
4. **Mineral worked** : LIMESTONE Main

5. Name and Address of the

Lessee : THE INDIA CEMENTS LIMITED
 DHUN BUILDING 827, ANNA
 SALAI CHENNAI CITY TAMIL
 NADU
 Phone:044-28521526, 28521527,28572100,28572400
 FAX :044-28526311

Owner : R K DAS, THE INDIA CEMENT LTD
 Coramandel Tower,
 93,Karpagam Avenue Sandome
 high road, R.A.Puram
 CHENNAI CITY TAMIL NADU
 Phone: 044-28521526,28
 FAX : 04428526311, 04

Mining Engineer

Name : K.ANANDKUMAR,Full Time
 Qualification : AMIE(MINING ENGINEERING)
 Appointment/ : 29/03/2019
 Termination date

Geologist

Name : Sri.BASKAR,Full Time
 Qualification : MSC (GEOLOGIST)
 Appointment/ : 07/07/2018
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	MP under 16(1) of MCR 2016	12/04/2017
	:	MP modif under 17(3) MCR 2016	04/04/2019

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Nil	The total mining lease area has already been explored under G1 level of exploration
1b	Exploration over lease area for geological axis 1 or 2	G1	G1	29 exploratory boreholes are drilled with total meterage of 907.30m in 200m*200m grid interval in the year 2016.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not applicable	Not applicable	Exploration carried out by Dept.of Geology & Mining, Govt.of Tamil Nadu, Guindy, Chennai.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	
1e	Balance reserve as on 01/04/20	8.425 Million tonnes	8.457 Million tonnes	As per AR submitted for the year 2022-2023.
1f	General remarks of inspecting officers on geology, exploration etc	Nil	The Shell limestone deposit of the lease area is flat bedded deposit with dipping towards east by 2 to 3 degrees with varying thickness from 3.5m to 27m underlain by topsoil with thickness varying from 0.5m to 6m and Sandy clay of thickness varying from 1.5m to 21.5m. Underlying this shell limestone is conglomeratic limestone followed by Sand Stone and sand.	The total mining lease area has already been explored under G1 level of exploration with 29 exploratory boreholes over a total meterage of 907.30m in 200m X 200m and 150m X 100m grid interval in the year 2016 by Department of Mines and Geology, Tamil

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Proposed area of working Site of mining between section line 200N-800N and 400E to 800 E.	Proposed area of working Site of mining between section line 200N-800N and 200E to 600 E.	The workings are within the proposed grid intervals. However, lagging from the proposed quantities.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes, One Top Soil Bench, One overburden bench, Three ore benches.	Yes, One Top Soil Bench, One overburden bench, Two ore benches.	Separate benches in topsoil, Overburden & Mineral are made as proposed.
2c	Stripping ratio or ore to OB ratio	1:0.58	1:0.18	Only 35 % of the proposed development & 90% of production quantities achieved
2d	Quantity of topsoil generation in m3	184060 M	68949.98 M3	Only 37% of the proposed topsoil quantity removed.
2e	Quantity of overburden generation in m3	369347.5 M3	116954.58M3	Only 32% of the proposed overburden quantity removed.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Nil	The mine is developed by open pit mechanized method with one separate bench each in topsoil and overburden and two benches in Mineral suitable to the flat bedded deposit.	-

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One pit	One pit	Only one pit, as proposed
3b	Quantity of ROM mineral production proposed	1278630 Ts	1152950.24 Ts	90% of the proposed production quantity achieved reportedly due to less demand of the captive Cement Plant.

3c	Recovery of sailable/usable mineral from ROM production	1150768 Ts	1118970.46 Ts	As per the approved proposal of 90% recovery of salable mineral 97% is achieved
3d	Quantity of mineral reject generation	63931 cbm 102290 Tonnes (at BD:1.6)	0	As per the proposed 10% proposed mineral reject generation, Nil rejection is reported in AR. Violation issued
3e	Grade of mineral rejects generation and threshold value declared.	SiO2 >18.0%	Nil reported.	Violation issued
3f	Quantity of sub grade mineral generation.	Nil	Nil	No sub grade generated or proposed.
3g	Grade of sub grade mineral generation	Not applicable	Not applicable	NA
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method	Mechanized method	As per plan
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No	No	NA
3j	Provision of drilling and blasting in mineral benches	No	No	-
3k	Provision of mining machineries in mineral benches	Back Hoe-2, Rock breaker-2, Tipper-5, Front End Loader-1, Dozer-1 & water tanker-1	Back Hoe-2, Rock breaker-1, Tipper-10, Front End Loader-1, Dozer-1 & Rock drill-1	As per Plan

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Overburden-5m, Limestone-5m	Overburden-5m, Limestone-5m	As proposed
3m	Total area covered under excavation/pits	22.77.5 ha	20.36.5 ha	Excavation within proposed grid interval. However, lagging from the proposed development
3n	Ore to OB ratio for the pit/mine during the year.	1:0.58	1:0.18	Only 35 % of the proposed development & 90% of production quantities achieved.
3o	Total area put in use under different heads at the end of year	Area under mining-22.77.5 Ha, Roads-1.15.0 Ha, Infrastructure-0.10.0 Ha Protective Bund-3.10.0 Ha Greenbelt-1.20.0 Ha	Area under mining-20.36.5 Ha Roads-1.15.0 Ha Infrastructure-0.10.0 Ha Protective Bund-3.00.0 Ha Greenbelt-1.20.0 Ha	-
3p	Production of ROM mineral during the last five year period as applicable	2018-19 =1333580 Ts 2019-20=1333880.00 Ts 2020-21=1667668.00 Ts 2021-22=1278029.00 Ts 2022-23=1278630.00 Ts	2018-19= 432574.54 Ts 2019-20=804875.44 Ts 2020-21=910675.55 Ts 2021-22=979212.30 Ts 2022-23=1152950.24 Ts	

3q General remarks Nil
of inspecting
officers on
method of mining
etc.

The mine is developed by -
open pit mechanized
method with one separate
bench each in topsoil
and overburden and two
benches in Mineral
suitable to the flat
bedded deposit.

Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Overburden is planned for back filling	Overburden utilized for back filling	As proposed.
4b	Location of topsoil, OB and mineral reject dumps	Overburden, Topsoil and mineral reject are planned for back filling	OB is utilized for backfilling over which topsoil is spread for plantation as purpose.	OB is utilized for backfilling over which topsoil is spread for plantation as purpose.
4c	Number of dumps within lease area and outside of lease area	No external dump	No external dump	The entire OB is utilized for backfilling of mined out pits.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	NA	NA	-
4e	Number of active and alive dumps.	Nil	Back filling is in progress.	Dumping of waste is for backfilling of mined out pits
4f	Number of dead dumps.	NIL	NIL	
4g	Number of dumps established.	NA	NA	NA
4h	Whether Retaining wall or garland drain all along dumps are there.	NIL	NIL	Garland drains of 4060m already made in the past are maintained.

4i	Length of Retaining wall or garland drain all along dumps	Nil	Nil	4060m length of garland drain constructed in the past are maintained.
4j	Number of settling ponds	Nil	Nil	Four settling pits are existing.
4k	Specific comments of inspecting officer on waste dump management	Nil	The entire OB is utilized for backfilling of mined out pits over which topsoil is spread for plantation as proposed	-

Solid Waste Management - Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Plan for full extraction.	Yes. Fully extracted	The mineral is fully extracted from the part of the pit before commencement of backfilling and in progress.
5b	Area under backfilling of mined out area	1.35.0 Ha	1.12.0 Ha	During the RY 1.12 Ha is backfilled out of proposed 1.35 Ha.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Yes	Yes, concurrently utilized for spreading over back filled area	Yes.
5d	Total area fully reclaimed and rehabilitated	NIL	NIL	As per AR-2022-2 fully reclaimed & rehabilitated is 4.40 Ha.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	NIL	The mineral is fully extracted from the part of the pit before commencement of backfilling and in progress.	-

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Submit before 1ST day of July every year	PMCP submitted on time and correctly on 09.06.2023	Yes, submitted within the prescribed time limit.
6b	Area available for rehabilitation (ha) .	2.45.0 Ha	2.45.0 Ha	-
6c	afforestation done (ha).	0.25.0 Ha	0.25.0 Ha	Appears to be correct.
6d	No. of saplings planted during the year	300 nos	300 nos	Appears to be correct as reported in the AR-2022-23
6e	Cumulative no .of plants	3900 Nos	3900 nos	Appears to be correct. However, as reported in the AR-2022-23 total no of trees planted within the ML area up to 31/3/2023 is 12200.
6f	Any other method of rehabilitation	0.25.0 Ha	0.25.0 Ha	Back filling
6g	Cost incurred on watch and care during the year	Rs 3.00 Lakhs	Rs 3.00 Lakhs	Appears to be correct.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	180m*75m*15m	290m*40m*17m	-
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	---	---	

6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	1.35.0 Ha	1.12.0 Ha	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	--	--	Reclamation and rehabilitation are by backfilling and plantation over the backfilled area.
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	---	---	
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	Nil	Nil	
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	Nil	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	NA	NA	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Yes	Complied. Environmental monitoring is being done quarterly.	Environmental monitoring is being done season wise.

6g	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	--	All the proposed PMCP activities are satisfactorily carried out. However, violation issued for lagging for the activity from the proposed.	--
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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Yes	Yes	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanized Method	Mechanized Method	Size based sorting
7c	Different grade of mineral sorted out at mines.	Lumps & fines	Lumps & fines	Nil
7d	Any beneficiation process at mines	--	--	No.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	--	The entire Mineral above the threshold value is consumed by suitably blending with high grade ores to arrive at the required grade of the captive cement plant thereby taking care of Mineral Conservation aspects.	--

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	Proposed for removal and concurrent use at back filled area	Top soil removed and utilized over back filled area for plantation.	
8b	Concurrent use or storage of topsoil	Proposed for removal and concurrent use at back filled area.	Top soil removed and concurrently utilized over back filled area for plantation.	--
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Not applicable	Not required	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Yes	Yes	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	1.35.0 Ha backfilling	1.12.0 Ha backfilling	There is lagging from the proposed extent for which violation is issued.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	11900+300	11900+300	As per AR-2022-23
8g	Survival rate	90%	91.90%	
8h	Water sprinkling on roads to control airborne dust	Yes	Yes	Water sprinkling is being done by water tanker. Permanent water sprinkler made for the length of 600m.

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	--	Aesthetic beauty in and around the mine is good.	--
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Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	--	M.R. Submitted up to August 2023 A.R. Submitted for the year 2022-23 on 26.06.2023	--
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mine Manager: Shri. R.Balamurugan (15.10.2018) Mining Engineer: Shri.R.Balamur ugan (15.10.2018) Geologist: Shri.K.Bhaskar (15.10.2018)	The reported officials were present in the field during site inspection.	--
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) Workings- 14.46.5 Ha Occupied by plant, buildings, residential, welfare buildings & roads-1.25.0 Ha, Other Purpose (Green belt, Periphery bund)-4.20.0 Ha.	In Order.	--

9d	Scrutiny of Annual return on afforestation	No.of Saplings Planted-300.	Appears to be correct.	--
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Out of proposed quantity of 63931 cbm i.e 102290 Tonnes (at BD : 1.6) mineral reject generation, Nil rejection is reported. Violation issued.	--
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM stock: Nil. Cement grade Lst: 1000 Tonnes closing stock. ROM stock: Nil. Cement grade Lst: 1000 Tonnes	Appears to be correct.	--
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Provided in part VI (iii) and Part-VII. Ex.Mine Price=Rs 220.83 Production Cost=Rs 220.83	Appears to be correct.	--
9h	Scrutiny of Annual return on fixed assets	Provided in part -II (A): Rs.1300342456.	Appears that Under Plant and Machinery the Capitalized Expenditure is exaggerated.	--
9k	Scrutiny of Annual return on mining machineries	Back Hoe-2, Rock breaker-1, Tipper-10, Front End Loader-1, Dozer-1 & Rock drill-1	Back Hoe-2, Rock breaker-2, Tipper-5, Front End Loader-1, Dozer-1 & water tanker-1	--

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
MCDR17	Rule 11(1)	20/11/2023			
Rule 45(7)		20/11/2023			

Date :

(V. JAYA KRISHNA BABU)

Indian Bureau of Mines