INDIAN BUREAU OF MINES
MINERALS DEVELOPMEMT AND REGULATION DIVISION

MCDR inspection REPORT

Chennai regional office

Mine file No : TN/TCR/LST-66-Mds **Mine code : 38TMN24003**

(i) Name of the Inspecting Officer and ID No. : **J103) V. Jaya Krishna Babu**

(ii) Designation : Regional Controller Mines

(iii) Accompaning mine Official with Designation : P.RAMASAMY ,SR.VP(MINES) & J.PRESLEY MACULAY DGM(MINE

(iv) Date of Inspection : 15/03/2019

(v) Prev.inspection date : 21/08/2017

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **ADHANAKURICHI**

(b) Registration NO. : **IBM/613/2011**

(c) Category : A Mechanised

(d) Type of Working : Opencast

(e) Postal address

State : TAMIL NADU
District : ARIYALUR
Village : ADHANAKURICHI
Taluka : SENDURAI
Post office : CEMENT NAGAR
Pin Code : 621730
FAX No. : 04329-248248
E-mail : j.thirumeni@indiacements.c
Phone : 04329-248206

(f) Police Station : DALAVOI

(g) First opening date : 06/01/1996

(h) Weekly day of rest : SUN

2. Address for correspondance : THE INDIA CEMENT LTD.
Dalavoi Cement Works, Cement Nagar PO-621730.
Sendurai Taluk,Ariyalur DT.

3. (a) Lease Number : TMN1042
(b) Lease area : 47.42
(c) Period of lease : 20
(d) Date of Expiry : 15/10/2026

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 : Lakshmi Aparna Sreekumar
M/S India Cements Ltd., 827,Anna salai,DHUN Building Chennai CHENNAI CITY TAMIL NADU
Phone:
FAX :

Agent : P.Balasubramaniyan
M/S The India Cements Ltd., 827,Annasalai, DHUN Building Chennai CHENNAI CITY TAMIL NADU
Phone:
FAX :

Mining Engineer
Name : K.Rathinavel,Full Time
Qualification : BE(MINING)
Appointment/ Termination date : 20/05/2016

Geologist
Name : P.Ramasamy,Full Time
Qualification : MSC (GEO)
Appointment/ Termination date : 02/07/1998

Manager
Name : J.PRIESTLY MACAULAY
Qualification : BE(MINING)
Appointment/ Termination date : 15/09/2003

6. Date of approval of Mining Plan/Scheme of Mining :

Mining Scheme rule 12 MCDR1988	26/07/2002
Mining Scheme rule 12 MCDR1988	15/02/2007
Mining Scheme rule 12 MCDR1988	06/01/2012
Mining Scheme rule 12 MCDR1988	06/01/2012
Mining Scheme rule 12 MCDR1988	10/05/2012
Mining Scheme rule 12 MCDR1988	22/03/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No Proposals for the year 2018-19.	NIL	Exploration carried out in entire ML area.
1b	Exploration over lease area for geological axis 1 or 2	NIL	NIL	16 bore holes were drilled for exploration purpose.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NIL	NIL	Exploration was already completed.
1d	Balance area to be explored to bring Geological axis in 1 or 2	NIL	NIL	Entire area covered under exploration.
1e	Balance reserve as on 01/04/20	4.90 Million Tonnes as on 01/04/2018.	Depleting the 216984 tonnes of production upto January 2019 ,remaining reserves 4.6 Million tonnes .(approx)	NIL
1f	General remarks of inspecting officers on geology, exploration etc	--	--	Satisfactory. Entire ML are was explroed.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Planned in between ML-2 to 9 & 1000E to 1300E.RL(m) 40.0-38.0 to 36.0m to34.0m	Mining oerations carried out as per proposals. The pit dimenssions are 540 m X 130-240 m X 13-20 m . Three bences maintained one in OB and Two in Ore.	NIL
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in topsoil,OB,Mineral Proposed.	Yes. Separate benches maintained as per proposal.	NIL
2c	Stripping ratio or ore to OB ratio	1:0.23	1.0.	NIL
2d	Quantity of topsoil generation in m3	NIL	NIL	No Top soil generation during the year 2018-19.

2e	Quantity of overburden generation in m3	NIL	NIL	No OB generation during the period 2018-19.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	--	--	Metamorphic bedded deposit almost flat. The pit was devloped by forming separate benches in topsoil,Ob and mineral.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One pit.	The mine is working as single pit.	NIL
3b	Quantity of ROM mineral production proposed	538007 tonnes	277670 tonnes.	Low production due to low offtake by cement plant.
3c	Recovery of sailable/usable mineral from ROM production	436200 tonnes	246524 tonnes.	NIL
3d	Quantity of mineral reject generation	101807 tonnes.	31146 tonnes.	NIL
3e	Grade of mineral rejects generation and threshold value declared.	SiO2 >18.0%	SiO2 >18.0%	High silicious Limestone stacked as mineral reject.
3f	Quantity of sub grade mineral generation.	NIL	NIL	--
3g	Grade of sub grade mineral generation	NIL	NIL	--
3h	Manual / Mechanised method adopted for segregating from ROM	Both mannual and mechanised methods.	Mannual and mechanised methods practiced for segregation of ROM.	NIL
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	NIL	NIL	NIL

3j	Provision of drilling and blasting in mineral benches	YES.	Drilling and blasting is done selectively such as making sump etc.	NIL
3k	Provision of mining machineries in mineral benches	YES.	The mine is worked by Non-Conventional method of mining by deploying Srface Miner ,which is eco-friendly devoid of drilling and blasting. long benches are formed with bench height of 5 m .Dumpers are used for mineral transportation.	NIL
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	YES.	The height and width of the benches are suitable for machinery deployed.	NIL
3m	Total area covered under excavation/pits	24.05 HC.	20.65 HC.	Due to lower production and devlopment work ,the area proposed for excavation is not achieved.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.25	1.0	No OB removal.
3o	Total area put in use under different heads at the end of year	Area under mining-24.05.5, Hc. Overburden-8.50.0, Hc. Mineral storage-0.60.0 Hc. Roads-1.64.0, Hc Protective-1.66 Hc., Greenbelt-5.40.0Hc.	Area under mining-20.65 HC, Overburden-8.50 Hc., Mineral storage-0.60.0 Roads-1.64 Hc. Protective-1.66 Hc. Greenbelt-5.40 Hc.	-

3p	Production of ROM mineral during the last five year period as applicable	2014-15 =461749.00 Ts 2015-16 =578608.00 Ts 2016-17=508760.00 Ts 2017-18= 498019.00 Ts 2018-19=538007.00 Ts	2014-15 =459986 Ts 2015-16=411063Ts 2016-17=407536 Ts 2017-18= 247712 Ts 2018-19=277670 Ts (upto Feb 2019)	ROM production achieved near half the quantiny due to low offtake by the cement plant.
3q	General remarks of inspecting officers on method of mining etc.	--	--	The devlopment and production on lower side.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	YES	As per proposal. waste dump on west side dimenssions 460 m X 230m X 17-20 m	Provisions made for Separate dumping of topsoil,OB and mineral rejects.
4b	Location of topsoil, OB and mineral reject dumps	North-western side of ML area	Overburden and waste dump is located in North-western side of ML area.	NIL
4c	Number of dumps within lease area and outside of lease area	One dump within mining lease & on back filled area.	One dump within mining lease & on back filled area .	--
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Out side UPL.	As per proposal.	NIL
4e	Number of active and alive dumps.	One dump.	One dump .	NIL
4f	Number of dead dumps.	One.	one.	--

4g	Number of dumps established.	1	1	Dump stabilised with plantations.
4h	Whether Retaining wall or garland drain all along dumps are there.	YES.	Garland drains made around the dump .	NIL
4i	Length of Retaining wall or garland drain all along dumps	NIL	No proposal	Garland drain made for 1000 m m in the past.
4j	Number of settling ponds	NIL	NIL	--
4k	Specific comments of inspecting officer on waste dump management	--	--	Dumps are maintained properly. Backfilling is carried out in worked out areas.

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.	Proposal for Back filling are given.	Back filling in mined out areas after mineral fully extracted.	NIL
5b	Area under backfilling of mined out area	0.30 Hc area proposed.	0.10 Hc area back filled.	NIL
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	YES.	YES.	NIL
5d	Total area fully reclaimed and rehabilitated	0.32 Hc.	0.32 HC.	Rehabilitated by plantations.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	__	__	Satifactory.

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).	YES	submitted.	NIL
6b	Area available for rehabilitation (ha) .	6.00 Hc .	Rehabilitation done over 4.5 Hc.	NIL
6c	afforestation done (ha).	0.32 Hc.	Afforestation as per proposal.	NIL.
6d	No. of saplings planted during the year	300 No's	300 No's	NIL
6e	Cumulative no .of plants	--	11000	-
6f	Any other method of rehabilitation	Back filling & afforestation.	Back filling & afforestation.	-
6g	Cost incurred on watch and care during the year	2.00 Lakhs	2.00 Lakhs	--
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	30m X 140m X 17.0m	30m X 35 m X 17.0m	--
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	101807 Ts	31146.16 Ts	--
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	300 plants	300 plants	--
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	NIL	NIL

6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NIL	NIL	--
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	NIL	NIL	--
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly environment monitoring reports are submitted.	Details furnished. with in permissible limts.	NIL
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	--	--	Satisfactory.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	YES	Entire ROM is transported to crusher located near cement plant. Mobile screener used to separate low grade mineral ,marl and other impurities.	No grade wise sorting at pit head.

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mobile screener used for removing marl and low grade limestone.	As per proposal.	Low grade limestone is used by blending with high grade limestone from other mines to achieve optimum utilisation.
7c	Different grade of mineral sorted out at mines.	YES.	Excavated limestone is used for cement making in the plant. Mobile vibration screener is used for , the fine particles of clay,marl etc. get separated leaving only boulders to upgrade the mineral quality.	NIL
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	--	--	Low grade mineral also utilised by adopting blending techniques for better mineral conservation.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal for Top soil removal during 2018-19.	No removal of Top soil.	NIL
8b	Concurrent use or storage of topsoil	YES	As per proposal.	NIL
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	YES.	As per proposal.	Separate dumps maintained. Top soil used for garland plantation purpose and in other places.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	YES.	Back filling is adoped in worked out areas and fines from Mobile screener also used for back filling purpose.	NIL

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	YES.	Reclamation of worked out pits by back filling with waste depending on availability of waste material and old dump rehabilitation by afforestation methods.	NIL
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	300 saplings proposed.	Plantation was done on non mineralised area.so for cumulatively 12500 no plantation done.	NIl
8g	Survival rate	More than 90 %	80 % survival observed.	NIL
8h	Water sprinkling on roads to control airborne dust	YES. Proposal given.	Water Tanker used for sprinkling on haul roads and transit points for dust control.	NIL
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	--	--	Satifactory.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Submitted.	Monthly returns submitted upto Febraury 2019. AR 2018-19 yet to submit. (Due on or before 1st july 2019)	NIL
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	AR for 2018-19 yet to submit.	AR 2017-18 checked. Geologist and Mining engineer details checked and were present during inspection.	NIL
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Details given in AR 2017-18.	Details checked and found satisfactory.	NIL
9d	Scrutiny of Annual return on afforestation	Details furnished in AR 2017-18.	Found correct.	NIL

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Details given.	Checked and found correct.	NIL
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Details given in AR2017-18.	satisfactory.	NIL
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Details given.	In AR 2017-18 the Ex - mine price and cost of production shown diffently. Since it is captive mine both should be same. The Mines manager was advised to follow the instructions in filling the AR. Violation in this regard was issued to lessee.	NIL.
9h	Scrutiny of Annual return on fixed assets	Details given.	Details given combinedly for 6 leases.	satisfactory.
9k	Scrutiny of Annual return on mining machineries	SURFACE MINER - 1 SHOVEL (HYDRAULIC) 1.700 CUM - 1 FRONT END LOADER 3.000 CUM - 1 DUMPER 35.000 TONNE - 1 DUMPER 40.000 TONNE - 2	Machinery deployed in the mine.	NIL

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

Violation observed			Show couse position		
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on	Compliance on
Rule 45(7)	01/04/2019				

Date :

(**V. Jaya Krishna Babu**)

Indian Bureau of Mines