

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

MCDR inspection REPORT

Chennai regional office

Mine file No : TN/TNL/LST-1-MDS

Mine code : 38TMN15088

- (i) Name of the Inspecting : **J103**) **V. Jaya Krishna Babu**
Officer and ID No.
- (ii) Designation : Regional Controller Mines
- (iii) Accompanying mine : R.Balasubramanian, Agent & Gopal palani, mines manage
Official with
Designation
- (iv) Date of Inspection : 15/10/2019
- (v) Prev.inspection date : 06/01/2017

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **RAMAYANPATTI -12.12 (GO.1**
- (b) **Registration NO.** : **IBM/7025/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : TAMIL NADU
- District : TIRUNELVELI
- Village : RAMAYANPATTI
- Taluka : TIRUNELVELI
- Post office : TIRUNELVELI
- Pin Code : 627358
- FAX No. : 0462-2339248
- E-mail : admn@krishnamines.com
- Phone : 0462-2333200
- (f) Police Station : SANKAR NAGAR
- (g) First opening date : 01/07/1958
- (h) Weekly day of rest : SUN
2. Address for : KRISHNA MINES
correspondance NO:23 RD SRIPURAM,
TIRUNELVELI.
3. (a) Lease Number : TMN1234
- (b) Lease area : 12.12
- (c) Period of lease : 10
- (d) Date of Expiry : 21/05/2009
4. Mineral worked : LIMESTONE Main

5. Name and Address of the

Lessee : SHRI K.SHANKAR
 23, SRIPURAM TIRUNELVELLI
 TIRUNELVELI TAMIL NADU
 Phone:333200,333877
 FAX :91462-339248

Owner : Vinayak Shankar, Partnership deed holder
 NO.23,sripuram, Tirunelveli
 TIRUNELVELI TAMIL NADU
 Phone:
 FAX :

Agent : R.Balasubramaniyan
 NO.23,sripuram Tirunelveli
 TIRUNELVELI TAMIL NADU
 Phone:
 FAX :

Mining Engineer
 Name : P.krishna Kumar,Full Time
 Qualification : BE(mining)
 Appointment/ : 10/07/2014
 Termination date

Geologist
 Name : Stalin Prakash,Full Time
 Qualification : MSC(GEO)
 Appointment/ : 15/03/2018
 Termination date

Manager
 Name : Gopal Palani
 Qualification : Dip.MIn.Engg.,, FMCC
 Appointment/ : 20/01/2016
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining : Renewal under rule 24 MCR1960 14/02/1991
 Mining Scheme rule 12 MCDR1988 07/02/1997
 Existing rule 11 MCDR1988 17/02/2005
 Renewal under rule 24 MCR1960 28/01/2009
 MP review under 17(1) MCR 2016 07/11/2017

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|---|---|------------------------|
| 1a | Backlog of previous year | No proposal given. | Area already explored by drilling 11 no. of bore holes for a metreage of 676 m in the lease area. | NIL |
| 1b | Exploration over lease area for geological axis 1 or 2 | NIL | No proposals given. | Area already explored. |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | Nil. No proposal during the current plan period. | M/s Geo exploration and mining solutions ,salem, carried out the exploration work in the ML area. | NIL |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | NIL | NIL | NIL |
| 1e | Balance reserve as on 01/04/20 | Mineable Reserves as on 01/09/2017 as per ROMP 1441 was 35,54,607 tonnes. | By depleting production of(2018-19) , 149300 tonnes the balanced mineable reserves as on 01/04/2019 is 34,05,307 tonnes. | NIL |
| 1f | General remarks of inspecting officers on geology, exploration etc | — | — | Satisfactory. |

Development :

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|--|---|-----------------------------------|
| 2a | Location of development w.r.t.lease area | During the period 2019-20 the workings are proposed to carryout between N-561469 to N-561543 , E-2486788 to E-2487277. | The workings are carried out as per proposals. | Satisfactory. |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | Yes. | Separate benches formed in Topsoil, OB and Mineral. | Mine is developed systamatically. |

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| 2c | Stripping ratio or ore to OB ratio | 1:0.18 | 1:0.2 | NIL |
| 2d | Quantity of topsoil generation in m3 | NIL | NIL | No topsoil generation. |
| 2e | Quantity of overburden generation in m3 | 26402 tonnes of mineral rejects generation proposed during the year 2018-19. | 29427 tonnes of overburden achieved. | NIL |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | -- | -- | Satisfactory. This deposit contain high magnesia Limestone and intrusions. |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|--|--|
| 3a | Number of pit proposed for production | One pit. | One pit. | The Mine was developed as single pit consisting of two Leases. |
| 3b | Quantity of ROM mineral production proposed | 176015 tonnes during 2018-19 and 176136 tonnes during 2019-20. | 149300 tonnes durind 2018-19 and 88385tonnes during 2019-20 (upto sep.2019) | NIL. |
| 3c | Recovery of sailable/usable mineral from ROM production | 149613 tonnes during 2018-19 and 149869 tonnes during 2019-20. | 149300 tonnes durind 2018-19 and 88385tonnes during 2019-20 (upto sep.2019) | NIL |
| 3d | Quantity of mineral reject generation | 26402 tonnes during 2018-19 and 26447 tonnes during 2019-20. | 25401 tonnes during 2018-19 and details for 2019-20 not available. | NIL |
| 3e | Grade of mineral rejects generation and threshold value declared. | Less than CaCo3 -34% | Less than treshhold value considered as mineral reject and stacked separately. | NIL |

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| 3f | Quantity of sub grade mineral generation. | NIL | NIL | No sub grade mineral ,as all grades such as Limestone, High magnesia Limestone and Sillicious Limestone are being used/sold by adopting blending to needy industries,M/S ICL and M/S Krishna mines white cem. |
| 3g | Grade of sub grade mineral generation | NIL | NIL | NIL |
| 3h | Manual / Mechanised method adopted for segregating from ROM | NIL | NIL | No beneficiation process adopted. |
| 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 by wagon drills and compressor combination. 100 mm dia. holes upto 11m depth using ANFO for blasting. | As per proposals Drilling,blasting and loading carried out. | Satisfactory. Rock breaker fitted to shovel used for loosening the strata and break boulders to avoid secondary blasting. |
| 3k | Provision of mining machineries in mineral benches | YES. provisions made. | The the width and height of the bench facilitates movement of heavy machinery like Shovel,Rock breaker,Front end loader and Tippers. | satisfactory. |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | Yes. | Benches are maintained with height of upto 10 m and width 12 m. | Satisfactory. |
| 3m | Total area covered under excavation/pits | 7.21 HC | 7.21 HC. | NIL |

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| 3n | Ore to OB ratio for the pit/mine during the year. | 1:0.18 | | |
| 3o | Total area put in use under different heads at the end of year | 7.21 Hc under pits, 4.07 Hc under dumps 0.08 HC under infrastructure , .20HC Roads, 0.56 Hc others. at the end of plan period. | As per proposals only. | NIL |
| 3p | Production of ROM mineral during the last five year period as applicable | 2014-15-149917 tonnes 2015-16-149782 " 2016-17-149659 " 2017-18-149930 (upto sep.19) " 2018-19-149613 " 2019-20 - 149869 " | 2014-15- 125040 tonnes 2015-16- 148657 " 2016-17- 148500 " 2017-18- 149700 " 2018-19- 149300 " 2019-20 - 88385 " | NIL. |
| 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) | Yes, separate dumping of OB,waste etc. No topsoil dump at present. | Separate dumps maintained for OB and Waste. | Top soil utilised for plantation purpose. |
| 4b | Location of topsoil, OB and mineral reject dumps | The waste dump located on Noth and North east of the lease area. | As per proposals. | NIL. |
| 4c | Number of dumps within lease area and outside of lease area | 2 dumps with in ML area and 2 old dumps out side ML area. | 2 dumps exist with in ML area. | NIL |

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| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Dumps are located outside the Ultimate Pit Limit. | As per proposals. | Dumps located Outside UPL on Non-mineralised area. |
| 4e | Number of active and alive dumps. | One dump is active and other one dump stabilised with in lease area. | As per proposals . | Two old dumps exist out side lease area . |
| 4f | Number of dead dumps. | One dump on North side with in Lease area. | On dump. | NIL |
| 4g | Number of dumps established. | One dump . | One dump is active and another dump stabilised by terracing and plantation. | NIL |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | Proposed. | Garland drains made, lessee was advised to construct pack wall at dump bottom to prevent slippage. | NIL |
| 4i | Length of Retaining wall or garland drain all along dumps | No proposals given. | Garlan drains and Retaining walls made in previous years. | NIL |
| 4j | Number of settling ponds | NIL | NIL | NIL |
| 4k | Specific comments of inspecting officer on waste dump management | — | — | lessee was advised to construct retaining wall at the bottom of active dump. |

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. | NIL. No proposal given. | The mine is in active state, workings not matured for back filling. | NIL |
| 5b | Area under backfilling of mined out area | NI(L | NIL | NIL |

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|----|---|------|---|--|
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | Yes. | Top soil generated was used for plantation on old dumps and garland plantation. | Satisfactory. |
| 5d | Total area fully reclaimed and rehabilitated | NIL | NIL | Area not matured for reclamation, however old and stabilised dumps are rehabilitated by way of plantation. |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | — | — | Satisfactory. |

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). | Not submitted. | Not received. | Violation pointed out. |
| 6b | Area available for rehabilitation (ha) . | NIL | NIL | No wasteland or reclaimed land available for rehabilitation |
| 6c | afforestation done (ha). | 580 plants. | 580 plants. | Plantation done along the boudary. |
| 6d | No. of saplings planted during the year | 580 saplings along the lease boundary. | plantation carried out. | plantation done on old dumps also for stabilisation. |
| 6e | Cumulative no .of plants | 2000 plants | 2000 plants | plantation on boundary,old dumps and outside Lease area. |
| 6f | Any other method of rehabilitation | NIL | NIL | Old dumps rehabilitated by plantation and terracing. |
| 6g | Cost incurred on watch and care during the year | Rs.21,750 | Watch and ward appointed. | NIL |

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| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D | NIL | NIL | NIL |
| 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 on backfilled area | NIL | NIL | NIL |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir | NIL | NIL | The pit will be converted into water reservoir after completely excavation of mineral. |
| 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 | No waste land available in the Lease area. |
| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha) | NIL | NIL | NIL |
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation | NIL | NIL | NIL |

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| 6p | Compliance of environmental monitoring (core zone and buffer zone) | YES. | Regular monitoring of Air,Noise,Water ,Vibration etc., pollutions by maintaining monitoring stations. | Satisfactory. |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | — | — | The mining operations are active state and no scope for Reclamation and Rehabilitation at this juncture. satisfactory. |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|---|---|---|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | Entire mineral will be loaded into trucks and transported to stackyard. | No mineral segregation at pit bottom. | The limestone and Magnesia limestone is separated at stackyard. |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | NIL | NIL | NIL |
| 7c | Different grade of mineral sorted out at mines. | Limestone, High Magnesia Limestone and Siliceous Limestone produced during the plan period. | The different Grades of limestone is supplied to cement plants of M/S ICL, M/s Krishna mines super white plant and other Local suppliers. | NIL |
| 7d | Any beneficiation process at mines | NIL | NIL | No mineral beneficiation process involved. |
| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | — | — | NIL |

Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

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|----|---|--|---|--|
| 8a | Separate removal and utilization of topsoil (Rule 32) | No Topsoil generation during plan period. | No Topsoil generation. | Topsoil removed was utilised for plantation purpose. |
| 8b | Concurrent use or storage of topsoil | YES. | No Top soil generation during plan period. | NIL |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Separate dumps proposed for OB/Waste etc. | Two dumps located in ML area, out of which one waste dump is active. | satisfactory. |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | No proposal given. | The mine is in active and advancing stage ,workings at Lower benches. | Workings not matured for restoration. |
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | NIL | NIL | NIL |
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | 2000 saplings proposed outside lease area. | Plantation carried out out side ML as proposed. More than 2000 saplings planted near CEM plant and other lands belonging to lessee. | NIL |
| 8g | Survival rate | 90% | 70% | NIL |
| 8h | Water sprinkling on roads to control airborne dust | Proposed. | Water sprinkling on haul roads, transit points are done by deploying water tanker. | satisfactory. |
| 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 |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

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| 9a | Status of submission of Monthly and Annual returns | Submitted. | AR 2018-19 submitted . | NIL |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Details furnished. | Information checked ,found satisfactory. | NIL |
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Details given. | Area under pits, dumps etc. given. | Satisfactory. |
| 9d | Scrutiny of Annual return on afforestation | 2000 saplings proposed | Plantation carried out outside the lease area to the tune of 2000 saplings with 90% survival rate. | Due to paucity of land plantation carried out outside ML area. |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | waste generation/mineral rejects are 26403 tonnes during 2018-19. | 25401 tonnes generated during 2018-19. | working on lower mineral benches. |
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | 149613 tonnes during 2018-19 and 149869 tonnes during 2019-20 of different grades of Limestone production proposed. | Details given. 149300 tonnes of mineral during 2018-19 and 88385 tonnes during 2019-20 (upto sep.2019) | production will be achieved in ensuing months. |

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|----|---|--|--|---|
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Details given. | The Ex.mine price and Sale value given. Mineral is sold to M/S India Cements Ltd., and used in lessees cem plant M/s Krishnamines super white factory and other needy industries. The above valus appears on higher side mainly due to deep workings. The lease is under non-captive category,the lessee applied for renewal one year befoe expiry under captive category, the district collectoer recommended for captive purpose and the same is under active consideration by the state government. | Ex.mine price and Sale values are on higher side. |
| 9h | Scrutiny of Annual return on fixed assets | Details given. | Details checked found satisfactory. | NIL |
| 9k | Scrutiny of Annual return on mining machineries | Details of machinery deployed are given. | The information checked during inspection ,deployment of machinery found. | Satisfactory. |

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 |
| Rule 11(4) | 29/01/2020 | | | | |
| Rule 26(2) | 29/01/2020 | | | | |
| MCDR17 Rule 37(2) | 29/01/2020 | | | | |

Date :

(V. Jaya Krishna Babu)

Indian Bureau of Mines