

| INDIAN BUREAU OF MINES MINERAL DEVELOPMENT AND REGULATION DIVISION MCDR INSPECTION REPORT Chennai Regional Office | | |
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| Mine file No.ALR/LST-45.MDS | | Mine code - 38TMN24003 |
| (i) | Name of the inspecting officer & Designation | KUMERESH A Senior Assistant Controller of Mines |
| (ii) | Accompanied mine official and designation | Shri. N.Jaya Bharata Reddy, General Manager(Mines) Shri K.Rathinavel,Sr.Manager(Mines) |
| (iii) | Date of inspection | 14.12.2024 |
| (iv) | Previous inspection Date | 08.07.2023 |
| PART-I: General Information | | |
| 1. | Mine Name | Adanakurichi Limestone Mine |
| (b) | Registration Number | IBM/613/2011 |
| (c) | Category | A |
| (d) | Type of Working | Opencast |
| (e) | Postal Address State District Village Taluka Post Office Pin Code FAX No. E-mail Phone | V.M.Mohan M/s. The India Cements Limited, Coromandal Towers, 93, Santhome High Road, Karapagam Avenue, Raja Annamalai Puram, Chennai - 600 028 Phone No: 044-28572100 Fax No: 04329 248248 Email id: palanikumaresan.m@indiacements.co.in |
| (f) | Police Station | Dalavoi |
| (g) | First opening date | 06.01.1996 |
| (h) | Weekly day of rest | Sunday |
| 2. | Address for correspondence | V.M.Mohan M/s. The India Cements Limited, Coromandal Towers, 93, Santhome High Road, Karapagam Avenue, Raja Annamalai Puram, Chennai - 600 028 Phone No: 044-28572100 Fax No: 04329 248248 Email id: palanikumaresan.m@indiacements.co.in |
| 3. | Lease Number | TMN1042 |
| | Lease Area | 47.42.0 Ha (Non forest Land) |
| | Period of lease | 20 Years |
| | Date of expiry | 19.10.2026 |

[illegible]

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| | Plan/Modified Mining Plan with five – year period and specific condition in approval letter, if any. | |
| | Date of Approval of Scheme of Mining/Modified Scheme of Mining with five – year period and specific condition in approval letter, if any. | Mining Scheme rule 12 MCDR 1988: 15.02.2007 Mining Scheme rule 12 MCDR 1988: 06.01.2012 Mining Scheme rule 12 MCDR 1988: 06.01.2012 Mining Scheme rule 12 MCDR 1988: 10.05.2012 Mining Scheme rule 12 MCDR 1988: 23.03.2016 Mp review under 17(1) MCR 2016: 10.11.2020 |

PART-II : OBSERVATION / COMMENTS OF INSPECTING OFFICER
EXPLORATION

| S. No. | Item | Proposals | Actual Work | Remarks |
|--------|---|----------------------|----------------------|---|
| 1a | Backlog of previous year | Nil | Nil | The total mining lease area has already been explored and the requirement of G1 level has been met. |
| 1b | Exploration over lease area for Geological axis 1 or 2. | G1 | G1 | 16 Exploration boreholes were drilled with total meterage of 703.50m with 200m*200m grid interval. |
| 1c | Exploration Agency & Expenditure in lakh Rupees during the year | Not applicable | Not applicable | 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 Category) | 3.262 Million tonnes | 3.423 Million tonnes | More reserves balance than proposed due to less depletion than proposed in past. |
| 1f | General comments of inspecting officer on geology, exploration etc. | - | - | Geology & Exploration of the mine were found satisfactory. |

DEVELOPMENT

| S. No. | Item | Proposals | Actual Work | Remarks |
|--------|---|---|--|--|
| 2a | Location of development w.r.t. lease area | Proposed area of working between section line ML-1255500 N to 1256500 N and 308200 E to 308600 E. | Auctual area of working between section line ML-1255500 N to 1256500 N and 308200 E to 308600 E. | Within the proposed area |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 13 of MCDR-2017) | Yes, One Top Soil/overburden Bench, Three limestone benches. | Yes, One Top Soil/overburden Bench, Three limestone benches. | As per proposal |
| 2c | Stripping ratio or ore to OB ratio | `1:0.05 | `1:0.00 | Lithological variation of the formation |
| 2d | Quantity of topsoil generation in m3 | Nil | Nil | Nil |
| 2e | Quantity of overburden generation in m3 | 7110 | 0 | Lithological variation of the formation and level of mine working. |

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| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc. | -- | -- | -- |
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EXPLOITATION

| S. No. | Item | Proposals | Actual Work | Remarks |
|--------|--|--|--|--|
| 3a | Number of Pit proposed for production | One Pit | One Pit | Only one pit, as proposed. (Combined pit for GO:70 and GO:16). |
| 3b | Quantity of ROM mineral production proposed | 249998.50 Ts | 187729.02 Ts | Deviation due to lithological variation of the formation |
| 3c | Recovery of salable/usable mineral from ROM production | 224998.65 Ts | 169847.36 Ts | Nil |
| 3d | Quantity of mineral reject generation | 24999.85 Ts/ 10870 m ³ | 17881.66 Ts/ 7774.63 m ³ | Deviation due to lithological variation of the formation |
| 3e | Grade of mineral rejects generation and threshold value declared. | SiO ₂ >18.0% | SiO ₂ >18.0% | Nil |
| 3f | Quantity of sub grade mineral generation. | Nil | Nil | Nil |
| 3g | Grade of sub grade mineral generation | Not applicable | Not applicable | NA |
| 3h | Manual / Mechanized method adopted for segregating from ROM | Mechanised Method | Mechanised Method | Nil |
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | No | No | Beneficiation study was done in Initial period. |
| 3j | Provision of drilling and blasting in mineral benches | No proposal for Drilling & blasting | Mining by non-conventional mining method | As proposed |
| 3k | Provision of mining machineries in mineral benches | Back Hoe-1, Tipper-2, Rock breaker-1, Dozer-1, Pumps-1 | Back Hoe-1, Tipper-2, Rock breaker-1, Dozer-1, Pumps-1 | As per proposal |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in RoMP | Overburden-5m, Limestone-5m | Overburden-5m, Limestone-5m | As proposed |
| 3m | Total area covered under excavation/pits | 20.65.0 ha | 20.65.0 ha | Within proposed limits |
| 3n | Ore to OB ratio for the pit/mine during the year. | `1:0.05 | `1:0.00 | Lithological variation of the formation and level of mine working. |

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| 3o | Total area put in use under different heads at the end of year | Area under mining-20.65.0, Overburden-8.50.0, mineral storage-0.44.0, Roads-1.64.0, Peripheral bund-1.66.0. | Area under mining-20.65.0, Overburden-8.50.0, mineral storage-0.35.0, Roads-1.64.0, Peripheral bund-1.66.0. | Within proposed limits |
| 3p | Production of ROM mineral during the last five-year period as applicable | 2019-20=615158 Ts 2020-21=621000 Ts 2021-22=356179 Ts 2022-23=378865 Ts 2023-24=249998.50 Ts | 2019-20=204219.60 Ts 2020-21=264958.20 Ts 2021-22=176659.38 Ts 2022-23=199719.66 Ts 2023-24=187729.02 Ts | Less limestone production due to less plant requirement |
| 3q | General remarks of inspecting officers on method of mining etc. | - | - | The method of mining was found satisfactory. |

SOLID WASTE MANAGEMENT-DUMPING

| S. No. | Item | Proposals | Actual Work | Remarks |
|--------|--|---|--|---|
| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 36,37) | Back filling proposed | Back filling carried out | Nil |
| 4b | Location of topsoil, OB and mineral reject dumps | Planned for Back filling (1255900N to 1256100N & 308200E to 308400 E) | Utilized for Back filling (1255900N to 1256100N & 308200E to 308400 E) | Nil |
| 4c | Number of dumps within lease area and outside of lease area | One | One | Nil |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Out side of UPL | Out side of UPL | Nil |
| 4e | Number of active and alive dumps. | Nil | Nil | Nil |
| 4f | Number of dead dumps. | Nil | Nil | Nil |
| 4g | Number of dumps established. | One | One | Stablised with plantations. |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | Nil | Nil | Garland drain is already made for 1000m. |
| 4i | Length of Retaining wall or garland drain all along dumps | Nil | Nil | Earthen bund existed. |
| 4j | Number of settling ponds | Nil | Nil | Exists 2 nos on western side and eastern side |
| 4k | Specific comments of inspecting officer on waste dump management | -- | -- | Waste dump management was found satisfactory. |

SOLID WASTE MANAGEMENT-BACKFILLING

| S. No. | Item | Proposals | Actual Work | Remarks |
|--------|---|--|--------------------------|---------|
| 5a | Status of part or full extraction of mineral from mined out area before starting backfilling. | Back filled proposed in mined out area | Back filling carried out | |

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|----|---|-------------|-----------|---------------------------------|
| 5b | Area under backfilling of mined out area | 0.13.25 Ha | 0.07.0 Ha | Due to less generation of waste |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32) | No proposal | Nil | |
| 5d | Total area fully reclaimed and rehabilitated | 1.49.0 Ha | 1.49.0 Ha | As per proposal |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc | -- | -- | -- |

PROGRESSIVE MINE CLOSURE PLAN

| S. No. | Item | Proposals | Actual Work | Remarks |
|--------|--|-------------------------------|-------------------------------|---------------------------------|
| 6a | Whether Annual report on PMCP submitted on time and correctly. Rule 26 (2) | Yes | Yes, submitted to IBM | Nil |
| 6b | Area available for rehabilitation (ha). | 1.49.0 Ha | 1.49.0 Ha | As per proposal |
| 6c | Afforestation done (ha). | 1.49.0 Ha | 1.49.0 Ha | As per proposal |
| 6d | No. of saplings planted during the year | 600 Nos | 600 Nos | As proposed |
| 6e | Cumulative no. of plants | 13231 Nos. | 13231 Nos. | --- |
| 6f | Any other method of rehabilitation | Backfilling and afforestation | Backfilling and afforestation | --- |
| 6g | Cost incurred on watch and care during the year | Rs1.90 Lakhs | Rs1.90 Lakhs | |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D) | 26m*30m*9m | 31m*23m*9m | |
| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings | 36375.65 Ts | 17881.66 Ts | Due to less generation of waste |
| 6j | Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation backfilled area | 600 nos (1.49.0 Ha) | 600 nos (1.49.0 Ha) | As per proposal |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir | NA | NA | Nil |
| 6l | Compliance on reclamation and rehabilitation by backfilling (v) any other specific means. | Not applicable | Not applicable | Not applicable |
| 6m | Compliance of rehabilitation of waste land within lease (i) afforestation | NA | NA | Nil |

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|----|---|-----|--|---|
| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha) | NA | NA | Nil |
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation | NA | NA | Nil |
| 6p | Compliance of environmental monitoring (core zone and buffer zone) | Yes | Complied as per proposal on season wise basis. | As proposed in Review of mining plan. |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | -- | -- | PMCP Compliance & progressive closure operations were found satisfactory. |

MINERAL CONSERVATION

| S. No. | Item | Proposals | Actual Work | Remarks |
|--------|--|-------------------------|-------------------|----------------|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | Yes, Size based sorting | Yes | Nil |
| 7b | Method of grade wise mineral sorting i.e. manual or mechanical. | Mechanized Method | Mechanized Method | Nil |
| 7c | Different grade of mineral sorted out at mines. | Lumps and fines | Lumps and fines | |
| 7d | Any beneficiation process at mines | Not applicable | Not applicable | Not applicable |
| 7e | General remarks of inspecting officer on Mineral Conservation & beneficiation issues | - | - | - |

ENVIRONMENT

| S. No. | Item | Proposals | Actual Work | Remarks |
|--------|---|------------------------------|----------------------------------|---------|
| 8a | Separate removal and utilization of topsoil (Rule 32) | No proposal | Nil | Nil |
| 8b | Concurrent use or storage of topsoil | No proposal | Nil | Nil |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Concurrent usage is proposed | Concurrent used for back filling | Nil |
| 8d | Use of overburden, waste rock, rejects and fines dump for restoring the land to its original use | Yes | Yes | Nil |
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | Yes | Yes | Nil |

| | | | | |
|----|--|-----------------|-----------------------|---|
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | 12631+600=13231 | 12631+600=13231 | Nil |
| 8g | Survival rate | >90% | >90% | Nil |
| 8h | Water sprinkling on roads to control airborne dust | Yes | Water tanker deployed | Nil |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | -- | -- | The aesthetic beauty in and around mines area was found satisfactory. |

COMPLIANCE UNDER RULE-45

| S. No. | Item | Proposals | Actual Work | Remarks |
|--------|---|---|---|--|
| 9a | Status of submission of Monthly and Annual returns | Submitted | Submitted | |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Mine Manager:R.Balamurugan (01.08.2023), Mining Engineer:K.Rathinavel (20.05.2016) & Geologist:K.Gokulnath (21.02.2022) | Provided in part-I | Presently, Mine Manager:K.Rathinavel (01.07.2024), Mining Engineer:S.Anandkumar (01.07.2024) & Geologist: P.Vignesh (25.10.2024) |
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | (i) Already Exploited and abandoned by Opencast mining = 1.90.0 Ha (ii) Covered under (O-C) workings = 14.90.0 Ha (iii) Reclaimed-rehabilitated = 3.85.0 Ha (iv) Used for waste disposal = 8.50.0 Ha (v) Occupied by plant ,buildings, residential, welfare building and roads = 1.64.0 Ha (vi) Used for any other purpose (Specify) Green belt & Peripheral bund = 7.41.0 Ha (vii) work done under progressive mine closure plan during the year = 0.000 | Provided in part-I, Sl.No-12 (i) Already Exploited and abandoned by Opencast mining = 1.90.0 Ha (ii) Covered under (O-C) workings = 14.90.0 Ha (iii) Reclaimed-rehabilitated = 3.85.0 Ha (iv) Used for waste disposal = 8.50.0 Ha (v) Occupied by plant ,buildings, residential, welfare building and roads = 1.64.0 Ha (vi) Used for any other purpose (Specify) Green belt & Peripheral bund = 7.41.0 Ha (vii) work done under progressive mine closure plan during the year = 0.000 | |
| 9d | Scrutiny of Annual return on afforestation | Nos-600 | Nos-600, Provided in part-V, Para-5 | |

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| | n | | | |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | 24999.85 Ts | Actual=17881.66 Ts , Provided in part-V, of 3 | |
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | ROM=249998.50 Ts | Actual ROM=187729.02 Provided in part-VI, Para-2 | |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Ex.Mine Price=Rs.352.75 Production cost=Rs=352.75 | Provided in part VI-3(ii) and Part-VII. Ex.Mine Price=Rs.352.75 Production Cost=Rs.352.75 | |
| 9h | Scrutiny of Annual return on fixed assets | 1292173040 | 1292173040 | Provided in part -II (A) |
| 9i | Scrutiny of Annual return on mining machineries | Back Hoe-1, Tipper-2,Rock breaker-1, Dozer-1, Pumps-1 | Mentioned in part -V, Sec-5/6/8/9. | |

| 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) | 06.01.2025 | 04.02.2025 | | | |

Date:

KUMERESH A
SrAsst Controller of Mines
 Indian Bureau of Mines