

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

Mining Plan Modification REPORT

Hyderabad regional office

Mine file No : AP/GNR/LST-50/HYD

Mine code : 38APR07066

- (i) Name of the Inspecting : **K007**) **SHAIVAL KARTIKEYA**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Shri V. Venakata Ramana, Sr. G.M. & Manager (Mines)
Official with
Designation
- (iv) Date of Inspection : 10/11/2022
- (v) Prev.inspection date : 14/04/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KCP LIMESTONE DEPOSIT-II**
- (b) **Registration NO.** : **IBM/680/2011**
- (c) **Category** : **A Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **ANDHRA PRADESH**
- District : **GUNTUR**
- Village : **MANDADI BLOCK II RF**
- Taluka : **DURGI**
- Post office : **DURGI**
- Pin Code : **522612**
- FAX No. : **08642-222350**
- E-mail : **cement.macherla@kcp.co.in**
- Phone : **08642-222303**
- (f) **Police Station** : **Macherla**
- (g) **First opening date** : **08/07/2016**
- (h) **Weekly day of rest** : **SUN**
2. **Address for correspondance** : **M/s KCP Cements,**
Macherla-522426
Guntur District, Andhra Pradesh
3. (a) **Lease Number** :
- (b) **Lease area** : **20.046 Ha.**
- (c) **Period of lease** : **50 Years**
- (d) **Date of Expiry** : **17/06/2066**
4. **Mineral worked** : **LIMESTONE** **Main**

5. Name and Address of the

Lessee : M/S K.C.P.LTD
MACHERLA CEMENT UNIT
MACHERLA GUNTUR ANDHRA
PRADESH
Phone:
FAX :

Owner : V L Dutt
M/s KCP Cements Ramakrishna
Buildings Crescent Road,
Egmore CHENNAI CITY TAMIL
NADU
Phone:
FAX :

Agent : B V P S Chowdhary
M/s KCP Cements Macherla-
522426 Andhra Pradesh
GUNTUR ANDHRA PRADESH
Phone: 08642-222303
FAX : 08642-222350

Mining Engineer

Name : K Hima Vamsi, Full Time
Qualification : B Tech Mining
Appointment/ : 16/03/2019
Termination date

Geologist

Name : Ajith babu, Full Time
Qualification : Msc Geology
Appointment/ :
Termination date

Manager

Name : V Venkata Ramana
Qualification : B Tech Mining
Appointment/ :
Termination date

6. Date of approval of Mining : MP modif under 17(3) MCR 2016 02/05/2019
Plan/Scheme of Mining : MP review under 17(1) MCR 2016 20/11/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|---|--|--|
| 1a | Backlog of previous year | F.Y. 2021-22: 03 nos. of DTH boreholes with cumulative depth of 90.0 meters. | F.Y. 2021-22: 03 nos. of DTH boreholes have been drilled with cumulative depth of 90.0 meters. | The entire lease area has already been explored under G1 level of exploration. |
| 1b | Exploration over lease area for geological axis 1 or 2 | 03 nos. of DTH boreholes have been proposed to know the depth persistence of mineral within lease area. | 03 nos. of DTH boreholes have been drilled with cumulative depth of 90.0 meters. | -do- |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | Not mentioned in the approved document. | M/s The Limited, Macherla, Dist. Guntur (Andhra Pradesh) Expenditure: Rs. 13500/- | - |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | No proposal. | Nil. | The entire lease area has already been explored under G1 level of exploration with earlier drilled 11 nos. of boreholes. |
| 1e | Balance reserve as on 01/04/20 | As on 01/04/2022: Under (111): 5.4308 Million Tonnes | As on 01/04/2022: Under (111): 5.5052 Million Tonnes | Avg. grade: CaO: 47.39% SiO2: 10.61 |

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| 1f | General remarks of inspecting officers on geology, exploration etc | The lease hold and its surrounding constitute a portion of the western end of the "Palnad Sub - basin" of Late Proterozoic sediments; the later in turn forms a part of the NE corner of the "Kadapa (Cuddapah) basin". This is a conspicuous entity in Indian Geology and is the repository of vast thickness of marine sediments of Proterozoic age, comprising the "Kadapa (Cuddapah Super Group" and "Kurnool/Palnad" Group of rocks). | The Palnad formation occurring in the area belongs to Kurnool group of formations. The Kurnool group is in turn equivalent to type area of lower Vindhyan System i.e Semri series of Indian Stratigraphy. The stratigraphy of Kurnool group is as below: Group Sub group Formation Thickness in m Kurnool group Kundair Nandyal Shale 50-100 Koilkuntla 15-50 Paniam Quartzite 10-35 Jammalamadugu Auk Shale 10-15 Narji Limestone 100-200 Banganapally Quartzite 10-170. | Nonconformity Archeans and Dharwars Intrusive grey, medium grained, Chloritised Biotite granite Greenstone/Gneiss. The Narji formation contains massive Limestone with Calcareous Shale and in the present context it has economic significance from which Cement is manufactured. |
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Development :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|--|--|--|
| 2a | Location of development w.r.t.lease area | F.Y. 2021-22: In Pit No. 1, in between UTM co-ordinates N1816390 to N1816604 and E332729 to E332904. | F.Y. 2021-22: In Pit No. 1, in between UTM co-ordinates N1816400 to N1816700 and E332700 to E333100. | For maintaining average of limestone, development and production has been carried out from different locations within pit no. 1. |

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| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | Topsoil: 01 no. OB/Waste: 01 no. Mineral/Ore: 03 nos. | Topsoil: 01 no. OB/Waste: 01 no. Mineral/Ore: 03 nos. | - |
| 2c | Stripping ratio or ore to OB ratio | 1 : 0.08 | 1: 0.036 | - |
| 2d | Quantity of topsoil generation in m3 | No proposal. | Nil. | - |
| 2e | Quantity of overburden generation in m3 | 16950.0 CuM | 17000.0 CuM | - |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | | | The development and production is being done through fully mechanized means. |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|---|---|---|
| 3a | Number of pit proposed for production | 01 no. | 01 no. | Nil. |
| 3b | Quantity of ROM mineral production proposed | F.Y. 2021-22: 540125.00 Metric Tonnes. | F.Y. 2021-22: 465800.00 Metric Tonnes. | - |
| 3c | Recovery of sailable/usable mineral from ROM production | 100% | 100% | No mineral-reject has been generated during F.Y. 2021-22. |
| 3d | Quantity of mineral reject generation | No proposal. | Nil. | No mineral-reject generated during F.Y. 2021-22. |
| 3e | Grade of mineral rejects generation and threshold value declared. | No proposal. | Nil. | -do- |
| 3f | Quantity of sub grade mineral generation. | No proposal. | Nil. | No mineral subgrade generated during F.Y. 2021-22. |
| 3g | Grade of sub grade mineral generation | No proposal. | Nil. | -do- |

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| 3h | Manual / Mechanised method adopted for segregating from ROM | Mechanised. | Mechanised. | - |
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | No proposal. | Nil. | - |
| 3j | Provision of drilling and blasting in mineral benches | Burden: 3.0 m Spacing: 4.0 m Depth: 6.0 m Explosive: ANFO | Burden: 3.0 m Spacing: 4.0 m Depth: 6.0 m Explosive: ANFO | - |
| 3k | Provision of mining machineries in mineral benches | 1. Backhoe 02 nos. with 1.7 CuM bucket capacity 2. Dumpers 05 nos. with 17.0 Tonnes capacity 3. Wagon Drill 01 no. with 115 mm dia 4. Compressor 01 no. with 450 CFM capacity 5. Water Tanker 01 no. with 9 K.L. capacity 6. Explosive Van 01 no. with 2.5 Tonnes carrier capacity 7. Tractor 01 no. 8. Service Van 01 no. | 1. Backhoe 01 no. with 1.7 CuM bucket capacity 2. Tppers 04 nos. with 17.0 Tonnes capacity 3. Air Compressor 01 no. with 450 CFM capacity 4. Rock Drill 01 no. with 115.0 Dia. 5. Explosive Van 01 no. with 2.5 Tonnes carrier capacity 6. Water Tanker 01 no. with 12000 Liters capacity | - |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | Topsoil: 0.50 m OB/Waste: 6.0 m Mineral/Ore: 6.0 m | Topsoil: 0.50 m OB/Waste: 6.0 m Mineral/Ore: 6.0 m | - |
| 3m | Total area covered under excavation/pits | 14.0 Ha. up to end of F.Y. 2025-26 | 9.150 Ha. up to end of F.Y. 2021-22 | - |

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| 3n | Ore to OB ratio for the pit/mine during the year. | 1 : 0.08 | 1: 0.036 | - |
| 3o | Total area put in use under different heads at the end of year | Pit: 14.0 Ha. Waste/reject- 1.31 Ha. Others- 1.05 Ha. Up to end of F.Y. 2025-26 | Pit: 9.150 Ha. Waste/reject- 1.690 Ha. Others- 0.985 Ha. Up to end of F.Y. 2021-22 | - |
| 3p | Production of ROM mineral during the last five year period as applicable | Yr. 2017-18: 585201.00 Metric Tonnes Yr. 2018-19: 577893.00 Metric Tonnes Yr. 2019-20: 600038.00 Metric Tonnes Yr. 2020-21: 600100.00 Metric Tonnes Yr. 2021-22: 540125.00 Metric Tonnes | Yr. 2017-18: 410000.00 Metric Tonnes Yr. 2018-19: 400000.00 Metric Tonnes Yr. 2019-20: 147000.00 Metric Tonnes Yr. 2020-21: 328000.00 Metric Tonnes Yr. 2021-22: 465800.000 Metric Tonnes | - |
| 3q | General remarks of inspecting officers on method of mining etc. | | | Mining has been carried out through the opencast method with fully mechanized means using conventional drilling and blasting. |

Solid Waste Management - Dumping:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|---|--|---------|
| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | Proposal has been given in the approved document for separate stacking of waste in Temporary Waste Dump no. 1 situated in between UTM co-ordinates N1816680 to N1816771 and E332970 to E333081. | Separate dumping of waste rock has been done in temporary waste dump no. 1 situated in between UTM co-ordinates N1816680 to N1816771 and E332970 to E333081. | - |

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|----|--|---|--|---|
| 4b | Location of topsoil, OB and mineral reject dumps | Waste Dump: Temporary Waste Dump no. 1 situated in between UTM co-ordinates N1816680 to N1816771 and E332970 to E333081. | Waste Dump: Temporary Waste Dump no. 1 situated in between UTM co-ordinates N1816680 to N1816771 and E332970 to E333081. | - |
| 4c | Number of dumps within lease area and outside of lease area | 03 nos. | 03 nos. | - |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | All three temporary dumps are proposed within ultimate pit limit. | All three temporary dumps are situated within ultimate pit limit. | - |
| 4e | Number of active and alive dumps. | 01 no. | 01 no. | - |
| 4f | Number of dead dumps. | No proposal. | Nil. | - |
| 4g | Number of dumps established. | No proposal. | Nil. | - |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | Proposal has been given in the approved document for construction of retaining wall and garland drain along temporary waste Dump no. 1 and 2. | Not constructed. | Violation has been pointed out. Revised proposal for construction of 900 meters long retaining wall and 900 meters long garland drain have been given in the Modified Mining Plan for achievement of the shortfall. |
| 4i | Length of Retaining wall or garland drain all along dumps | Retaining Wall: 557.0 m x 1.5 m x 1.0 m Garland drain: 557.0 m x 1.0 m x 0.50 m | Not constructed. | -do- |
| 4j | Number of settling ponds | No proposal. | Nil. | - |
| 4k | Specific comments of inspecting officer on waste dump management | | | Nil. |

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. | No Proposal. | Nil. | - |
| 5b | Area under backfilling of mined out area | No Proposal. | Nil. | - |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | No Proposal. | Nil. | - |
| 5d | Total area fully reclaimed and rehabilitated | F.Y. 2021-22: 0.185 Ha. area will be utilized for plantation of 460 nos. of saplings. | F.Y. 2021-22: 0.185 Ha. area has been utilized for plantation of 460 nos. of saplings. | Location of plantation: N1816388 and E332800 |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | | | Nil. |

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). | As per rule 26(2), lessee has to submit the annual report before 1st day of July of every year. | Submitted before due date. Information has been cross verified during inspection. | No major deviation has been observed. |
| 6b | Area available for rehabilitation (ha) . | No Proposal. | Nil. | - |
| 6c | afforestation done (ha) . | No Proposal. | Nil. | - |
| 6d | No. of saplings planted during the year | No Proposal. | Nil. | - |
| 6e | Cumulative no .of plants | No Proposal. | Nil. | - |

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| 6f | Any other method of rehabilitation | No Proposal. | Nil. | - |
| 6g | Cost incurred on watch and care during the year | No Proposal. | Nil. | - |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D | No Proposal. | Nil. | - |
| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings | No Proposal. | Nil. | - |
| 6j | Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on on backfilled area | No Proposal. | Nil. | - |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir | No Proposal. | Nil. | - |
| 6l | Compliance on reclamation and rehabilitation by backfilling (v) any other specific means. | No Proposal. | Nil. | - |
| 6m | Compliance of rehabilitation of waste land within lease (i) afforestation | 460 nos. | 460 nos. | Plantation has been done along 7.5 m barrier zone. |
| 6n | Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha) | 0.185 Ha. | 0.185 Ha. | -do- |

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|----|---|--|-----------------------------|---|
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation | By plantation | By plantation | -do- |
| 6p | Compliance of environmental monitoring (core zone and buffer zone) | Proposal has been given in the approved document for regular monitoring of the environmental parameters in the core and buffer zone. | Being done as per proposal. | All the parameters are within the permissible limits. |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | | | Nil. |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--------------|-------------|---------|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | No Proposal. | Nil. | - |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | No Proposal. | Nil. | - |
| 7c | Different grade of mineral sorted out at mines. | No Proposal. | Nil. | - |
| 7d | Any beneficiation process at mines | No Proposal. | Nil. | - |

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| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | Chemical specification of Limestone required in the captive cement plant: CaO- 44.00% to 45.00% and SiO ₂ - 14.00% Average grade of Limestone present in the mine: CaO- 47.39% and SiO ₂ - 10.61% |
|----|--|--|

Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|---|--|---------|
| 8a | Separate removal and utilization of topsoil (Rule 32) | No Proposal. | Nil. | - |
| 8b | Concurrent use or storage of topsoil | No Proposal. | Nil. | - |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Proposal has been given in the approved document for separate stacking of waste in Temporary Waste Dump no. 1 situated in between UTM co-ordinates N1816680 to N1816771 and E332970 to E333081. | Separate dumping of waste rock has been done in temporary waste dump no. 1 situated in between UTM co-ordinates N1816680 to N1816771 and E332970 to E333081. | - |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | No Proposal. | Nil. | - |

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|----|---|---|--|--|
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | F.Y. 2021-22: 0.185 Ha. area will be utilized for plantation of 460 nos. of saplings. | F.Y. 2021-22: 0.185 Ha. area has been utilized for plantation of 460 nos. of saplings. | Location of plantation: N1816388 and E332800 |
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | 460 nos. of saplings will be planted over 0.185 Ha. area. | 460 nos. of saplings have been planted over 0.185 Ha. area. | -do- |
| 8g | Survival rate | No proposal. | Approx 90% | - |
| 8h | Water sprinkling on roads to control airborne dust | Proposal has been given in the approved document for water sprinkling on roads to control airborne dust through the water tanker. | Being done as per proposal. | - |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | | | Nil. |

Compliance of Rule 45:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|---|---|---------|
| 9a | Status of submission of Monthly and Annual returns | M.R. Submitted up to November 2022. A.R. Submitted up to F.Y. 2021-22. | M.R. Submitted up to November 2022. A.R. Submitted up to F.Y. 2021-22. | Nil. |

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|----|---|---|---|------|
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Manager: Shri V. Venkata Ramana Mining Engineer: Shri S.Prasad Geologist: Shri M. Ajith Babu | Manager: Shri V. Venkata Ramana Mining Engineer: Shri S.Prasad Geologist: Shri M. Ajith Babu | Nil. |
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Pit: 9.150 Ha. Waste/reject- 1.690 Ha. Others- 0.985 Ha. | Pit: 9.150 Ha. Waste/reject- 1.690 Ha. Others- 0.985 Ha. | Nil. |
| 9d | Scrutiny of Annual return on afforestation | Within Lease Area: 460 nos. with 92% survival rate. Outside Lease Area: 100 nos. with 80% survival rate. | Within Lease Area: 460 nos. with Aapprox 90% survival rate. Outside Lease Area: 100 nos. with 80% survival rate. | Nil. |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | Mineral-reject: NIL Grade: NIL | Mineral-reject: NIL Grade: NIL | Nil. |
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | Closing Stock ROM: NIL Graded Ore: NIL | Closing Stock ROM: NIL Graded Ore: NIL | Nil. |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Sale value: Nil. Ex-mine Price: Rs. 253.16 Per Metric Tonne Cost of Production: Rs. 253.20 Per Metric Tonne | Sale value: Nil. Ex-mine Price: Rs. 253.16 Per Metric Tonne Cost of Production: Rs. 253.20 Per Metric Tonne | Nil. |
| 9h | Scrutiny of Annual return on fixed assets | Rs. 40776656/- | Rs. 40776656/- | Nil. |

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| 9k | Scrutiny of Annual return on mining machineries | 1. Backhoe 01 no. with 1.7 CuM bucket capacity 2. Tppers 04 nos. with 17.0 Tonnes capacity 3. Air Compressor 01 no. with 450 CFM capacity 4. Rock Drill 01 no. with 115.0 Dia. 5. Explosive Van 01 no. with 2.5 Tonnes carrier capacity 6. Water Tanker 01 no. with 12000 Liters capacity | 1. Backhoe 01 no. with 1.7 CuM bucket capacity 2. Tppers 04 nos. with 17.0 Tonnes capacity 3. Air Compressor 01 no. with 450 CFM capacity 4. Rock Drill 01 no. with 115.0 Dia. 5. Explosive Van 01 no. with 2.5 Tonnes carrier capacity 6. Water Tanker 01 no. with 12000 Liters capacity | Cross verified from the field logbooks. |
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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 :

(SHAIVAL KARTIKEYA)

Indian Bureau of Mines