

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

Review and updation of Mining Plan REPORT

Bangalore regional office

Mine file No : KRL/PAL/LST/1/BNG

Mine code : 38KRL08001

- (i) Name of the Inspecting : **S19**) **SANDEEP KUMAR SINGH**
Officer and ID No.
- (ii) Designation : Assistant Controller Mine
- (iii) Accompanying mine : Sri Jose, Manager and Sri Sony, Mining Engineer and S
Official with
Designation
- (iv) Date of Inspection : 11/12/2020
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **PANDARATHU**
- (b) **Registration NO.** : **IBM/4265/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **KERALA**
- District : **PALAKKAD**
- Village : **PUDUSSERY**
- Taluka : **PALAKKAD**
- Post office : **WALAYAR**
- Pin Code : **678624**
- FAX No. : **0491-2862230 (F)**
- E-mail : **jtkmcl@yahoo.com,ro@malaba**
- Phone : **0491-2862220 (O),944600476!**
- (f) **Police Station** : **WALAYAR**
- (g) **First opening date** : **04/06/1980**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **MALABAR CEMENTS LTD.,**
correspondance **MALABAR CEMENTS LTD , WALAYAR POST, PALAKKAD,**
KERALA-678624.
3. (a) **Lease Number** : **KRL0003**
- (b) **Lease area** : **245.69**
- (c) **Period of lease** : **20**
- (d) **Date of Expiry** : **22/12/2023**
4. **Mineral worked** : **LIMESTONE** **Main**

5. Name and Address of the

Lessee : MALABAR CEMENTS LTD
 WALAYAR POST, PALAKKAD,
 PALAKKAD KERALA
 Phone:0491-2862373
 FAX :0491-2862230

Owner : K. PADMAKUMAR
 M/s MALABAR CEMENTS LIMITED
 WALAYAR DIST-PALAKKAD
 PALAKKAD KERALA
 Phone: 0491-2862373
 FAX : 0491-2862230

Agent : JOSEPH FRANCIS
 WALAYAR DIST-PALAKKAD
 PALAKKAD KERALA
 Phone: 0491-2862373; 09446004748
 FAX : 0491-2862230

Mining Engineer

Name : SONNY KURIA KOSE, Full Time
 Qualification : B.E.MINING
 Appointment/ : 12/12/2005
 Termination date

Manager

Name : JOSE THOMAS
 Qualification :
 Appointment/ : 01/02/1986
 Termination date

6. Date of approval of Mining	:	Existing rule 11 MCDR1988	09/11/1995
Plan/Scheme of Mining	:	Renewal under rule 22 MCR1960	29/05/2002
	:	Mining Scheme rule 12 MCDR1988	21/04/2006
	:	Mining Scheme rule 12 MCDR1988	28/11/2011
	:	Mining Scheme rule 12 MCDR1988	10/03/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	6 nos. of boreholes with depth 30-50 m each proposed from year 2016-17 to 2018-19 .	No Exploration carried out	Violation issued
1b	Exploration over lease area for geological axis 1 or 2	Total 2 nos. of boreholes with depth of 30-50 m each has been proposed for the year 2019-20.	No Exploration carried out during the year 2019-20	Violation issued.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not mentioned	Exploration was not carried out during the year 2019-20	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	Not mentioned	G-1- 30.90 ha, G-3- 204.0407 ha. No exploratory drilling carried out to upgrade the G-3 area of 0 to G-1/G-2 axis.	Violation issued for not carrying out exploration activities as per the proposal. Also, Exploration proposals incorporated in the upcoming plan period 2021-22 to 2025-26 to upgrade G3 area to G-2/G-1.
1e	Balance reserve as on 01/04/20	10.749 million tonnes with grade 35 % CaO as on 30.10.2015	8950956 tonnes of Limestone as on 1.04.2020.	As per AR 2019-20.

1f	General remarks of inspecting officers on geology, exploration etc	-	<p>i) Total 8 nos. of boreholes have been proposed up to the year 2019-20 with depth of 30m to 50m each borehole, against which no exploratory borehole drilling has been carried out till date. Violation issued.</p> <p>ii)The balance Reserve figures have been reported correctly.</p>	<p>i)It was observed during site visit that mining operations in the Pandarathu Limestone Mining Lease are being carried out in absence of any valid accorded Environmental Clearance and Forest Clearance. A letter to the State Government addressing to Director, Directorate of Mining & Geology . Thiruvanthapuram with a copy to Additional Chief secretary, Govt. of Kerala, Directorate of Industries & Commerce to take necessary action in this regard has been sent(Ltr no 279/464/95/BNG dated 16/12/2020)</p>
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	N: 1200888 to 1201069, E-693491 to 693642)Sec BB'-CC'	Development carried out within the proposed extent	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches proposed for OB and mineral	Benches maintained as per the proposal	-
2c	Stripping ratio or ore to OB ratio	1:0.61(in Cum)	1:0.35(in Cum)	Ore production- 416362 tons~154208.14 Cum, Waste- 148499 tons~54999.62 Cum
2d	Quantity of topsoil generation in m3	No proposal	Nil	Nil

2e	Quantity of overburden generation in m3	136216 Cum	54999.62 Cum	(148499 tons of OB generation). Violation issued
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	-	Against the proposed overburden of 1,36,216 cu.m, only 54,999 cu.m of overburden has been handled for the year 2019-20, thereby leading to 60% less development than the approved proposal. Violation issued.	It was observed during site visit that mining operations in the Pandarathu Limestone Mining Lease are being carried out in absence of any valid accorded Environmental Clearance and Forest Clearance. A letter to the State Government addressing to Director, Directorate of Mining & Geology . Thiruvanthapuram with a copy to Additional Chief secretary, Govt. of Kerala, Directorate of Industries & Commerce to take necessary action in this regard has been sent(Ltr no 279/464/95/BNG dated 16/12/2020).

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One Pit proposed	One Pit	-
3b	Quantity of ROM mineral production proposed	6,00,000 tons	4,16,362 tons	Violation issued.
3c	Recovery of sailable/usable mineral from ROM production	100 %	100 %	Nil
3d	Quantity of mineral reject generation	No proposal	Nil	Nil

3e	Grade of mineral rejects generation and threshold value declared.	No proposal	Nil	Nil
3f	Quantity of sub grade mineral generation.	No proposal	Nil	Nil
3g	Grade of sub grade mineral generation	No proposal	Nil	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	No proposal for Segregating of ROM. Only Crushing and screening proposed	Crushing of ROM carried out.	Feed size-500-1000 m Out- put size- 200 mm Type of crusher- Jaw crusher- 450 & 250 TPH
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	Deep hole drilling and blasting proposed.	Deep hole drilling and blasting carried out.	Drills of 100 mm dia. Blasting carried out Slurry explosive & cord Relay detonators.
3k	Provision of mining machineries in mineral benches	Excavator and Tipper combination proposed.	i)Hydraulic Excavator- 2.7 cum-3 nos. ii)Back Hoe- 1 Cum-1 no. ii)Tipper-35 tons- 9 no. iii) Tipper-10 tons- 1no. iii) Drill-100 mm-4 nos. iv) Water tanker-27000 litres- 1no. v)Dozer- 3 nos.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of benches in OB & Limestone -9 m.	Height of bench in OB & Limestone- 9 m.	Nil
3m	Total area covered under excavation/pits	30.90 ha at the end of the plan period (2020-21)	30.90 ha	As reported in AR 2019-20.

3n	Ore to OB ratio for the pit/mine during the year.	1:0.61(in Cum)	1:0.35(in Cum)	Ore production- 416362 tons~154208.14 Cum, Waste- 148499 tons~54999.62 Cum
3o	Total area put in use under different heads at the end of year	i)Area under Mining- 30.9 ha ii) Waste dump- 27.47 ha iii)Infrastructure & roads- 12.74 ha. iii)Mineral storage & Mineral separation plant- 4.2 ha. iv)Green belt- 8.19 ha. at the end of the plan period(2020-21)	i)Area under Mining- 30.9 ha ii) Waste dump- 27.24 ha iii)Infrastructure- 12.74 ha. iv)Other Purpose(v)Crushing Plant, mineral storage)-3.3 ha. vi) Work done under Progressive mine closure plan during the year- 6.00 ha	As per land use reported in AR 2019-20.
3p	Production of ROM mineral during the last five year period as applicable	2016-17: 6,00,000 tons 2017-18: 6,00,000 tons 2018-19: 6,00,000 tons 2019-20: 6,00,000 tons (in tonnes)	2016-17: 4,25,861 tons 2017-18: 4,50,421 tons 2018-19: 3,15,174 tons 2019-20: 4,16,362 tons (in tonnes)	Nil

3q	General remarks Nil of inspecting officers on method of mining etc.	Against the proposal of 6,00,000 tonnes of ROM production, only 4,16,362 tonnes of ROM production have been achieved thereby leading to 30 % less ROM production than the approved proposal. Violation issued.	It was observed during site visit that mining operations in the Pandarathu Limestone Mining Lease are being carried out in absence of any valid accorded Environmental Clearance and Forest Clearance. A letter to the State Government addressing to Director, Directorate of Mining & Geology . Thiruvanthapuram with a copy to Additional Chief secretary, Govt. of Kerala, Directorate of Industries & Commerce to take necessary action in this regard has been sent(Ltr no 279/464/95/BNG dated 16/12/2020)
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Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping proposed for OB.	OB dumping carried out in the earmarked area.	No topsoil and Mineral Reject generation.
4b	Location of topsoil, OB and mineral reject dumps	OB dump- E-693361 to 694052 N-1200603 to 1200711.	OB dumping carried out at the earmarked location as per the proposal.	Nil
4c	Number of dumps within lease area and outside of lease area	1 OB dump within the lease	1 OB dump within the lease.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	OB Dump Proposed outside UPL	OB dump is outside UPL.	-

4e	Number of active and alive dumps.	1 OB dump within the lease	1 OB dump within the lease	-
4f	Number of dead dumps.	Nil	Nil	Nil
4g	Number of dumps established.	No proposal	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall & Garland drain proposed along the toe of the waste dump	Retaining wall and garland drain not present at the toe of waste dump as per the proposal.	Violation issued
4i	Length of Retaining wall or garland drain all along dumps	800m retaining wall and 810m garland drain has been proposed for the year 2016-17	Retaining wall and garland drain do not exist at the toe of the waste dump as per the proposal	Violation issued
4j	Number of settling ponds	No proposal	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management		The construction of 800m retaining wall and 810m garland drain has been proposed for the year 2016-17. It is observed during inspection that the retaining wall and garland drain do not exist at the toe of the waste dump as per the approved proposals. Violation issued.	It was observed during site visit that mining operations in the Pandarathu Limestone Mining Lease are being carried out in absence of any valid accorded Environmental Clearance and Forest Clearance. A letter to the State Government addressing to Director, Directorate of Mining & Geology . Thiruvanthapuram with a copy to Additional Chief secretary, Govt. of Kerala, Directorate of Industries & Commerce to take necessary action in this regard has been sent(Ltr no 279/464/95/BNG dated 16/12/2020).

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	Nil
5b	Area under backfilling of mined out area	No proposal	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	Nil	Nil
5d	Total area fully reclaimed and rehabilitated	No proposal	Nil	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	-	-	No backfilling proposals.

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).	To be submitted before 1st of July every year	Submitted	Nil
6b	Area available for rehabilitation (ha) .	1.188(0.05 ha Waste dump and 1.138 ha Green belt)	1.1 ha(Green belt)	As reported by the Lessee
6c	afforestation done (ha).	1.188 ha. (Including waste dump & Green belt)	1.1 ha(Green belt)	
6d	No. of saplings planted during the year	515 saplings proposed.(15 waste dump & 500 Green belt area)	500 saplings planted within lease area with 80 % survival rate.	As reported in AR 2019-20
6e	Cumulative no .of plants	2235 nos. of plants.(Includ ing waste dump & Green belt)	2000 nos. of plants(Green belt)	As reported by the Lessee

6f	Any other method of rehabilitation	No proposal	Nil	Nil
6g	Cost incurred on watch and care during the year	Not mentioned	Nil	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	No proposal	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No proposal	Nil	Nil
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.	No proposal	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	Nil	Nil

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	Nil	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring proposed for Air, water, noise, Soil & Dust.	Environmental monitoring carried out for Air, Water, Noise & dust. All parameters are within Limits	Environmental monitoring Report for the month of Feb-20 available. All environmental parameters within limit
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	-	-	The PMCP proposals have been implemented in the mine as per the proposal.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	No proposal for grade wise sorting. Only Crushing and screening proposed	Crushing of ROM carried out.	Feed size-500-1000 m Out- put size- 200 mm Type of crusher- Jaw crusher- 450 & 250 TPH.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No grade wise sorting proposed.	Nil	Nil
7c	Different grade of mineral sorted out at mines.	No proposal	Nil	Nil
7d	Any beneficiation process at mines	No proposal	Nil	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	-	-	No specific comments

Environment:

Sl.No.	Item	Propasals	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)	Separate dumping proposed for OB	Separate dump for OB maintained.	No reject and fines generation
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Nil	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Nil	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	2235 nos. of plants.(Including waste dump & Green belt)	2000 nos. of plants(Green belt)	As reported by the Lessee
8g	Survival rate	Not mentioned	80 % within ML.	As reported in AR 2019-20.
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on roads proposed	Water sprinkling carried out as per the proposal	One water sprinkler of 27 KL used for water sprinkling on haul roads.

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	—	—	It was observed during site visit that mining operations in the Pandarathu Limestone Mining Lease are being carried out in absence of any valid accorded Environmental Clearance and Forest Clearance. A letter to the State Government addressing to Director, Directorate of Mining & Geology . Thiruvanthapuram with a copy to Additional Chief secretary, Govt. of Kerala, Directorate of Industries & Commerce to take necessary action in this regard has been sent(Ltr no 279/464/95/BNG dated 16/12/2020).
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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 Oct-2020 ***** A.R. of the year 2019-20 submitted on 25.06.2020	M.R. Submitted up to Oct-2020 ***** A.R. of the year 2019-20 submitted on 25.06.2020	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer- Shri Sony Kuriyakose ii) Geologist- Nil iii) Manager- Shri Jose Thomas	The Mining Engineer, Geologist and the Manager were present during inspection on 11/12/2020 & 12/12/2020	The notice of appointment of Geologist in Form- 'H' has not been submitted as per the provision of Rule (46), though the appointment has been made on 29.10.2020.

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.)Area under Mining- 30.9 ha ii) Waste dump- 27.24 ha iii)Infrastructure- 12.74 ha. iv)Other Purpose (v)Crushing Plant, mineral storage)-3.3 ha. vi) Work done under Progressive mine closure plan during the year- 6.00 ha	Appears to be correct	Nil
9d	Scrutiny of Annual return on afforestation	500 nos. of sapling within ML area with 80 % survival rate.	Appears to be correct	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Appears to be correct.	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	O/s- 35418 tons ROM Production- 416362 tons C/s- 31345 tons	Appears to be correct.	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of Production- Rs 780/ton Ex mine price- Rs. 780/ton	The Cost of production and ex-mine price has not been reported correctly, since royalty has not been included in the cost of production. In case of captive mines, the Ex-mine price per tonne is the per unit cost of production.	Violation issued
9h	Scrutiny of Annual return on fixed assets	Rs. 255801276 including industrial, plant & machinery etc.	Appears to be correct.	Nil

9k	Scrutiny of Annual return on mining machineries	Hydraulic Excavator- 2.7 cum-3 nos. ii)Back Hoe- 1 Cum-1 no. ii)Tipper-35 tons- 9 no. iii) Tipper-10 tons- 1no. iii) Drill-100 mm-4 nos. iv) Water tanker-27000 litres- 1no. v)Dozer- 3 nos.	Appears to be correct.	Violation issued.
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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
MCDR17	Rule 11(1)	18/12/2020	12/02/2021				
	Rule 46	18/12/2020	12/02/2021				
MCDR17	Rule 45(7)(a)	18/12/2020	12/02/2021				

Date :

(SANDEEP KUMAR SINGH)

Indian Bureau of Mines