

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

**MCDR inspection REPORT
Hyderabad regional office**

Mine file No : AP/GNR/LST-44/HYD

Mine code : 38APR07051

- (i) Name of the Inspecting : 25) SHRI IBRAHIM SARIF
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine :
Official with
Designation
- (iv) Date of Inspection : 09-OCT-20
- (v) Prev.inspection date : 18-JAN-20

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : TERALA(49.18 HA)
- (b) **Registration NO.** : IBM/680/2011
- (c) **Category** : A Mechanised
- (d) **Type of Working** : Opencast
- (e) **Postal address**
- State : ANDHRA PRADESH
- District : GUNTUR
- Village : TERALA
- Taluka : MACHERLA
- Post office : MACHERLA
- Pin Code : 522426
- FAX No. : 08642222350
- E-mail : it.macherla@kcp.co.in
- Phone : 08642222303
- (f) **Police Station** : Macherla
- (g) **First opening date** : 08-DEC-09
- (h) **Weekly day of rest** : SUN
2. **Address for** : TERALA VILLAGE
correspondance DURGI MANDAL
GUNTUR DISTRICT
3. (a) **Lease Number** : APR2597
- (b) **Lease area** : 49.18
- (c) **Period of lease** : 20
- (d) **Date of Expiry** : 11-DEC-28
4. **Mineral worked** : LIMESTONE Main

5. Name and Address of the

Lessee : M/S.KCP LTD
 MACHERLA AT&PO GUNTUR
 ANDHRA PRADESH
 Phone:08642222303
 FAX :08642-222350

Owner : DR.V.L.DUTT,C&MD
 2,P.V. CHERIAN CRESCENT,
 CHENNAI,TAMIL NADU.
 CHENNAI CITY TAMIL NADU
 Phone: 4466772600
 FAX : 4466772620

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

Manager
 Name : S.PRASAD
 Qualification : DIPLOMA IN MINING
 Appointment/ : 18-JAN-10
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	20-OCT-14
Plan/Scheme of Mining	:	MP review under 17(1) MCR 2016	23-FEB-18

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No back log of previous years exploration	Nil	
1b	Exploration over lease area for geological axis 1 or 2	Entire area is to be covered under G1 level of exploration.	Entire area was covered under G1 level of exploration.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	--	Agency: Natural Reesource Development Co-operative Society Ltd., Hyderabad under the supervision of Lessee's representative. So far, Rs. 3,74,500 of expenditure incurred for exploraiton.	
1d	Balance area to be explored to bring Geological axis in 1 or 2		No area is available for exploration as entire area is explored in G1 scale.	No comments
1e	Balance reserve as on 01/04/20		Reserves as on 01.04.2018 : 2.57 Million tonnes Less Production in 2018-19-0.4 million Tonnes, 2019-20-0.373 million Tonnes balance Reserves : 1.81 Million Tonnes	
1f	General remarks of inspecting officers on geology, exploration etc		The general lithological succession in the lease area is grey limestone followed by pink limestone. The grey limestone is useable in the cement plant but pink limestone is not useable. The contact zone is having gradational changes, as such it may be used some times. The pink limestone is exposed in the excavated pit at bottom.	

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	It was proposed to develop the pit due North between gridlines E334146-E334660 N1816484 - N1816737 With two benches	Pit is developed in between co-ordinates E334450-E334850 N1816300 - N1816650	As the working is moving to the north the depth of mineralization decreases due to ore body disposition.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Area is devoid of Overburden. Only top soil and the soil in the crevices was likely to be generated.	The top soil is worked separately wherever possible	
2c	Stripping ratio or ore to OB ratio	No OB generation proposed, Only soil generation of 1200 cu m was assessed in 2019-20. Hence SR is 1 : 0	2500 Tonnes of OB is reported to be generated. Stripping Ratio is 1 : 0.006	
2d	Quantity of topsoil generation in m3	1200 cum of Top Soil to be generated	About 700 cum during the year 2019-20	
2e	Quantity of overburden generation in m3	Nil	2500 tonnes during the Year	Violation was pointed out

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	<p>The general topography is almost flat. There is a relief of about 8m between the south and north . North of the lease is at lower elevation than South. Limestone bed is dipping towards south and the pit is being developed towards north.</p> <p>A pit of about 400m x 400m is being developed with two benches. One soil dump is there of about 150m X 100m. The bottom RL of the pit is 147.79 m.</p> <p>The mine is being developed with conventional drilling and blasting with loading using the tippers.</p>	The limestone is crushed at Mandadi Limestone Mine which is at a distance of about 4km from the mine. The crushed material is taken to the plant by aerial ropeway of about .
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One pit was proposed for production	One pit is being developed	
3b	Quantity of ROM mineral production proposed	401350 T limestone ROM proposed for 2019-20	2019-20= 3,73,000 tons	
3c	Recovery of sailable/usable mineral from ROM production	Entire Limestone proposed to be utilised	Entire ROM produced is utilised as proposed	
3d	Quantity of mineral reject generation	NIL generation assessed	Nil generated	
3f	Quantity of sub grade mineral generation.	Nil generation assessed for the year 2019-20	Nil generated	

3h	Manual / Mechanised method adopted for segregating from ROM	No segregation proposed	Intercalated soil within limestone crevices is segregated wherever possible.	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	Not done	
3j	Provision of drilling and blasting in mineral benches	115mm dia drill holes with blasting using ANFO Slurry and Nonel initiating system proposed	115mm dia drill holes with blasting using ANFO Slurry and Nonel initiating system practiced	
3k	Provision of mining machineries in mineral benches	Mechanized mine proposed using excavator - tipper combination.	1.7 cu m back hoe type excavator along 5 nos of tippers of 17 cu m are being used along with 1 dozer and 1 drill machine and a compressor. The powder factor of 9 to 9.5 t/kg explosive has been obtained.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM		7m high benches are suitable for method of mining proposed in MP/SOM with excavator of 9.5 m boom height.	
3m	Total area covered under excavation/pits	Area covered under mining till 2022-23= 17.79 ha.	2019-20=10.2 ha	
3n	Ore to OB ratio for the pit/mine during the year.	No Overburden generation proposed during the year	2500 tonnes of waste is reported to be produced	Violation pointed out.

3o	Total area put in use under different heads at the end of year	Area degraded till 2022-23 Pit- 17.79 ha Dump=1.85 ha. Top soil stacking 0.21 ha. Road 1.01.ha. Green belt 1.5 hectare.	Pit- 10.2 ha. Waste dump=1.4 ha. Road=0.1 ha.
3p	Production of ROM mineral during the last five year period as applicable	2014-15= 306413 T 2015-16=300353 T 2016-17= 400085 T 2017-18= 400050 T 2018-19=401350 T 2019-20 = 4,00132 T	2014-15= 240000 T 2015-16=300000 T 2016-17= 400000 T 2017-18= 390000 T 2019-20=400000T
3q	General remarks of inspecting officers on method of mining etc.	The pit has reached ultimate pit limit in the North west corner and bench width is reduced to 3m after DGMS permission.	

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 of soil proposed	Separate dumping of soil undertaken	
4b	Location of topsoil, OB and mineral reject dumps	Dumping of soil is proposed in the northern part of the pit between grid line N 1816775-1816925 and E 334600 334700	Dumping of soil is undertaken in the northern part of the pit between grid line N 1816775-1816925 and E 334600 334700	

4c	Number of dumps within lease area and outside of lease area	one dump poposed within lease area	one dump is there in the field at present within the lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	dumping was proposed outside ultimate pit limit	dumping was done outside ultimate pit limit
4e	Number of active and alive dumps.	one active dump	One soil dump is there of about 150m X 100m with a max height of about 8m is observed in the field.
4f	Number of dead dumps.	NIL	NIL
4g	Number of dumps established.	no proposal	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal	NIL
4i	Length of Retaining wall or garland drain all along dumps	No proposal	Nil
4j	Number of settling ponds	No proposal	No separate settling pond is there

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	The pink limestone is exposed in the bottom bench, which is not entirely useable	The systematic floor sampling should be done to ensure the end of cement grade limestone.
5b	Area under backfilling of mined out area	No proposal	No area is under backfilling at present.	

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Soil proposed for simultaneous use in plantation	The soil is stored in the dump and used for plantation whenever required. The entire soil generated in 2018-19 is disposed in dump.
5d	Total area fully reclaimed and rehabilitated	No proposal	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.		The southern part of the benches have reached the ultimate pit limit at some places and the plantation activity within 7.5m of buffer area has not been undertaken. The soil dump needs to be used for the purpose

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).	Annual report under need to be submitted.	Not submitted	Violation pointed out
6b	Area available for rehabilitation (ha) .	No proposal	Plantation has not been undertaken for the rehabilitation of worked out benches	
6c	afforestation done (ha).	No proposal for rehab. of worked out benches	Not done	
6d	No. of saplings planted during the year	No proposal for rehab. of worked out benches	Not done	
6f	Any other method of rehabilitation	No proposal for rehab. of worked out benches	Not done	

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D		No proposal for rehab. of worked out benches and not done any work for the purpose as well
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal for rehab. of by backfilling	Not done
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No proposal for rehab. of by backfilling	Not done
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir		The backfilling of the pit is not possible . So there is a proposal for rehabilitation by making water reservoir.
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	300 saplings over 0.52 ha proposed in 2019-20	350 sapplings planted during the year 2019-20
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	300 saplings over 0.52 ha proposed in 2019-20	work has been done broadly as per proposal
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	300 saplings over 0.52 ha proposed in 2019-20	the plantation has been done in the 7.5m buffer zone.

6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly Monitoring being undertaken regularly.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	The southern part of the benches have reached the ultimate pit limit at some places and the plantation activity within 7.5m of buffer area has not been undertaken. the woekd out benches may now be considered for reclamation and rehabilitation.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	No proposal	No grade wise limestone sorting is undertaken.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No proposal	NA	
7c	Different grade of mineral sorted out at mines.	No proposal	NA	
7d	Any beneficiation process at mines .	No proposal	Mineral processing is not done in the lease . Only sizing is done and that too at the crusher installed in Mandadi Lst Mine and then dispatched to plant located about 6 km at Macherla by aerial ropeway.	

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No grade wise limestone sorting is undertaken. Only the intercalated soil is segregated during the process of excavation by the machine
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	It is proposed to remove top soil and used for plantation	Soil genertaed is stacked at earmarked place.	
8b	Concurrent use or storage of topsoil	Proposed to use the entire soil generation concurrently for plantation.	Soil genertaed is stacked at earmarked place.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No overburden , waste rock, reject or fine generation proposed	Waste rock is stated to be generated.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Not applicable	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal for Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not undertaken	

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	300 saplings over 0.52 ha proposed in 2019-20	350 saplings planted in 7.5m safety zone in the year 2019-20.
8g	Survival rate	--	About 90% survival is there
8h	Water sprinkling on roads to control airborne dust	Water sprinkling arrangement is to be made to suppress the dust	Water sprinkling undertaken to suppress the air borne dust.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		The mining causes the change in topography. In the absence of waste for backfilling , the excavated pit is to be converted into water reservoir , thus changing the land use pattern. Plantation is being carried out by the lessee to improve the aesthetic beauty.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns			
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer in charge M. SAI KIRSHNA & Geologist in charge P. MANOHAR REDDY		The above persons are employed, but the geologist is not having requisite experience

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under Mining : 10.15 Ha, Waste Disposal :1.46 Ha, Infrastructure :0.1Ha,	The same is observed during inspection	
9d	Scrutiny of Annual return on afforestation	350 sapplings planted during the year	The same is observed during the inspection	No comment
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	There is no report of Mineral reject generation during the Year	No Mineral reject generated during the year	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Nil	Nil	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production, Ex-Mine Price, Rs. 236.05	Same is observed	
9h	Scrutiny of Annual return on fixed assets	68072684	As reported by lessee, the same is common to all the 4 leases nearby	
9k	Scrutiny of Annual return on mining machineries	BACK HOE (1.7 CUM)-1 No., TIPPER (17 CUM)-5 No., AIR COMPRESSOR (450 CUM/MN)-1 No., ROCK DRILL ((NON-ELEC.)115 MM)-1 no., WATER TANKER(12000.00 LITRE)-1 No., DOZER (180 HP)-1	Above machines are deployed in the lease area	

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
MCDR17	Rule 11(1)	20-JAN-21			
MCDR17	Rule 26(2)	20-JAN-21			
MCDR17	Rule 55(1)(3)	20-JAN-21			
MCDR17	Rule 45(7)(a)	20-JAN-21			

Date :

(SHRI IBRAHIM SARIF)

Indian Bureau of Mines