INDIAN BUREAU OF MINES
MINERALS DEVELOPMEMT 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 Officer and ID No. : **M017) MANISH K MAINDIRATTA**

(ii) Designation : Regional Controller Mines

(iii) Accompaning mine Official with Designation : Sri Venkatramana, Sri S Prasad and others

(iv) Date of Inspection : 18/01/2020

(v) Prev.inspection date : 13/08/2018

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 : 08/12/2009

(h) Weekly day of rest : SUN

2. Address for correspondance : TERALA VILLAGE
DURGI MANDAL
GUNTUR DISTRICT

3. (a) Lease Number : APR2597
(b) Lease area : 49.18
(c) Period of lease : 20
(d) Date of Expiry : 11/12/2028

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/ Termination date	:	18/01/2010

6. Date of approval of Mining Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	20/10/2014
		MP review under 17(1) MCR 2016	23/02/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	2018-19= 10 DTH proposed	2018-19= 10 DTH undertaken	Form I and Form J submitted to IBM.
1b	Exploration over lease area for geological axis 1 or 2	Entire area was covered under G1 level of exploration. Lessee proposed to establish reserves at depth by means of 10 DTH holes of 14m each	Entire area was covered under G1 level of exploration. Lessee proposed to establish reserves at depth by means of 10 DTH holes of 14m each	
1d	Balance area to be explored to bring Geological axis in 1 or 2	NIL	NIL	
1e	Balance reserve as on 01/04/20	Reserves as on 1/12/2017 111-2.587 mT 211-0.147 mT	Depletion 1/12/2017-31/3/2018= 0.048mT 2018-19 = 0.4mT Balance reserves as on 1/4/2019= 111=2.139mT 211=0.147mT	2019-20 till dec 2019= 0.28mT (281395 T)
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 E334150-E334850 N1816350 - N1816650 With two benches	Pit has been developed due North between gridlines E334450-E334780 N1816300 - N1816615 with two benches	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 in 2018-19. Only soil generation of 700 cu m was assessed for 2018-19	No OB generated. However the soil has been generated , which is stacked separately.	
2d	Quantity of topsoil generation in m3	750 CuM of soil generation assessed for 2018-2019.	As per register 16022 cu m of top soil is disposed to dump.	
2e	Quantity of overburden generation in m3	NIl	Area is devoid of Over burden.	

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	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 north. Limestone bed is dipping towards south and the pit is being developed towards north. 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. The mine is being developed with conventional drilling and blasting with loading using the tippers.	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 .

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	400050 T limestone ROM proposed for 2018-19	2018-19= 4,00,000 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 in 2018-19	Nil generated	
3e	Grade of mineral rejects generation and threshold value declared.	No proposal	Not applicable	
3f	Quantity of sub grade mineral generation.	Nil generation assessed for the year 2018-19	Nil generated	
3g	Grade of sub grade mineral generation	No proposal	Not applicable	

3h	Manual / Mechanised method adopted for segregating from ROM	No segregation proposed	Intercalated soil within limestone crevices is segregated whereever 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.	2018-19=10.2 ha
3n	Ore to OB ratio for the pit/mine during the year.	No Overburden generation proposed during the year	No Overburden generated during the year
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	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	one dump is there in the field at present.	
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 about8m is observed in the field.	
4f	Number of dead dumps.	NIl	NIl	
4g	Number of dumps established.	One	One dump established	

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	Not applicable
4j	Number of settling ponds	No proposal	No separate settling pond is there
4k	Specific comments of inspecting officer on waste dump management		-----

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	
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	
6e	Cumulative no .of plants	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	
6g	Cost incurred on watch and care during the year	No proposal	No proposal for rehab. of worked out benches and not done any work for the purpose as well	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No proposal for rehab. of by backfilling	Not done	
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 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.
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	------	-------
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	300 saplings over 0.52 ha proposed in 2018-19	955 saplings planted over about same area near pillar 11-13 in 7.5m safety zone
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	300 saplings over 0.52 ha proposed in 2018-19	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 2018-19	the plantation has been done in the 7.5m buffer zone.
6p	Compliance of environmental monitoring (core zone and buffer zone)		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	Not applicable
7c	Different grade of mineral sorted out at mines.	No proposal	Not applicable
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

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Proposed	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	No overburden , waste rock, reject or fine generated	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal in 2018-19	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 2018-19	955 saplings planted over about same area near pillar 11to 13 in 7.5m safety zone in the year 2018-19.
8g	Survival rate		About 90% survival is there
8h	Water sprinkling on roads to control airborne dust		Water sprinkling undertaken.
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.

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 Dec 2019 A.R. Submitted up to 2018-19	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer - M Sai Krishna	During inspection it is found that Full time geologist has not been appointed.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	As reported in Return Pit- 10.2 ha. Waste dump=1.4 ha. Road=0.1 ha.	Broadly as per submission
9d	Scrutiny of Annual return on afforestation	955 saplings with 90% survival within ML and 500 saplings with 85% survival reported in returns	Broadly as per submission
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	NIL reported	NIL observed
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM production of 4lac ton reported	verified with the production record.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	CoP has been submitted as 331.60 Rs PMT with mining cost as 200.50 Rs PMT and ex mine price also submitted as 331.60 Rs PMT	It has been understood that CoP includes the transportation cost upto the plant. So the reporting of exmine price as equal to CoP is not justified in the case. No proper justification has been found regarding reporting of depreciation as zero in the Annual return.
9h	Scrutiny of Annual return on fixed assets	Submitted	
9k	Scrutiny of Annual return on mining machineries	Submitted	Machinery deployed as submitted.

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 55(1)(1	27/02/2020				
MCDR17 Rule 26(2)	27/02/2020				
MCDR17 Rule 45(7)(a)	27/02/2020				

Date :

(**MANISH K MAINDIRATTA**)

Indian Bureau of Mines