

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

MCDR INSPECTION REPORT

Ajmer regional office

Mine file No : RAJ/KOTA-1/LST-1

Mine code : 38RAJ19001

- (i) Name of the Inspecting : **S012**) **Sharma H.C.**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Sh. S. B. Sharma, Mine Agent & Sh. Vivek Rawat, Geolo
Official with
Designation
- (iv) Date of Inspection : 06-SEP-16
- (v) Prev.inspection date : 17-SEP-15

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **MCL**
- (b) **Registration NO.** : **IBM/7378/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
State : RAJASTHAN
District : KOTA
Village : MORAK
Taluka : RAMGANJ MANDI
Post office : ADITYA NAGAR
Pin Code : 326520
FAX No. : 07459232231
E-mail : mclmorak@kappa.net
Phone : 07459232146
- (f) Police Station : Morak
- (g) First opening date : 21-DEC-77
- (h) Weekly day of rest : SUN
2. Address for : SR GENERAL MANAGER
correspondance MANGALAM CEMENT LTD, ADITYA NAGAR,
PO MORAK, DISTT- KOTA
3. (a) Lease Number : RAJ0013
- (b) Lease area : 895
- (c) Period of lease : 20
- (d) Date of Expiry : 21-FEB-97
4. Mineral worked : LIMESTONE Main

5. Name and Address of the

Lessee : MANGLAM CEMENTS LIMITED
 ADITYA NAGER -326517 PO-
 MORAK DISTT-KOTA KOTA
 RAJASTHAN
 Phone:)7459)44237,44262
 FAX :

Owner : K. C. Jain
 Mangalam Cement Ltd. P. O.
 Adityanagar, Morak, Distt.
 Kota KOTA RAJASTHAN
 Phone:
 FAX : 07459232156

Agent : S.B.Sharma
 Mangalam cement Ltd Aditya
 Nagar Morak KOTA RAJASTHAN
 Phone: 07459232262
 FAX : 07459232231

Mining Engineer

Name : S. B. Sharma, Full Time
 Qualification : B. E. (Mining)
 Appointment/ : 08-MAR-91
 Termination date

Geologist

Name : Vivek Rawat, Full Time
 Qualification : M Tech(Applied Geology), FCC(R)
 Appointment/ : 13-JAN-95
 Termination date

Manager

Name : Ramesh Chaudhry
 Qualification : B. E. (Mining), FCC (R)
 Appointment/ : 31-MAR-15
 Termination date

6. Date of approval of Mining	:	Existing rule 11 MCDR1988	03-FEB-93
Plan/Scheme of Mining		Existing rule 11 MCDR1988	18-AUG-97
		Mining Scheme rule 12 MCDR1988	22-FEB-99
		Mining Scheme rule 12 MCDR1988	25-SEP-03
		Modif.of approved Mining Plan	18-AUG-06
		Mining Scheme rule 12 MCDR1988	04-NOV-11
		Modif.approved Mining Scheme	13-FEB-13
		MP modif under MCR 1960	10-JUN-16

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	30 Hectares	55 Hectares	
1b	Exploration over lease area for geological axis 1 or 2	30 Hect for Geological Axis G1.	55 Hect for Geological Axis G1.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Exploratory drilling from out side agency with all other jobs by in house. Expenditure not specified.	Drilling by M/S Apex corporation. Expenditure 1.078 lacs.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Covered entire leasehold.	
1e	Balance reserve as on 01/04/20	101.96 Million Tonnes	105.925 Million Tonnes.	
1f	General remarks of inspecting officers on geology, exploration etc	Not applicable.	The entire leasehold had been covered under exploration & no further prospecting is required.	

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Block I & Block II	Block I & Block II	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in Top soil, Overburden and Mineral proposed.	Separate benches in Top soil, Overburden and Mineral provided.	
2c	Stripping ratio or ore to OB ratio	1:0.99	1:1.32	
2d	Quantity of topsoil generation in m3	1,00,930 Cu M.	142334 Tonnes	

2e	Quantity of overburden generation in m3	40,61,622 Tonnes	29,58,966 Tonnes
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Not applicable	The stripping ratio of 1:0.99 had been proposed, but during the Inspection it was observed to be 1:1.32, which represents that proportional development of pits is not proper.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Block I, Block II & III	Block I, Block II & III	
3b	Quantity of ROM mineral production proposed	45,00,000 Tonnes	23,77,543.210 Tonnes	
3c	Recovery of sailable/usable mineral from ROM production	90% Recovery	90% Recovery	
3d	Quantity of mineral reject generation	35000 T - Block-I, 164375 T- Block II & 215675 T - Block III & IV.	228955 T	
3e	Grade of mineral rejects generation and threshold value declared.	CaCO ₃ - 59 to 70%, MgCO ₃ - 1.6 to 2.1%, SiO ₂ - 18 to 27%	CaCO ₃ - 59 to 70%, MgCO ₃ - 1.6 to 2.1%, SiO ₂ - 18 to 27%	
3f	Quantity of sub grade mineral generation.	11,25, 189 T during 2016-17	45,500 T	Out of 45,500 T of Subgrade 15000 T had been used.
3g	Grade of sub grade mineral generation	Not Specified	CaCO ₃ - 72 to 73.1%, MgCO ₃ - 2.1 to 2.6%, SiO ₂ - 16 to 18%	
3h	Manual / Mechanised method adopted for segregating from ROM	Dry beneficiation by two stage double deck vibrating screen.	Dry beneficiation by two stage double deck vibrating screen.	

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposals.	None	Previously carried out at H.O., IBM, Nagpur.
3j	Provision of drilling and blasting in mineral benches	Deep hole drilling & blasting with deck charging.	Being Done.	
3k	Provision of mining machineries in mineral benches	HEMM (Shovel Dumper Combination).	Being done.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	
3m	Total area covered under excavation/pits	11.31 Hects.	18 Hects.	
3n	Ore to OB ratio for the pit/mine during the year.	1:0.99	1:1.24	
3o	Total area put in use under different heads at the end of year	Area under Mining- 304.80 ha upto plan period i.e up to 2020-21, Waste Dumping- 30.15 up to plan period, Green Belt up to plan period- 26.5 ha.	Area under Mining- 235.0 up to 2015-16, Waste Dumping- 18.04 ha up to 2015-16, Afforestation 20 ha up to 2015-16.	
3p	Production of ROM mineral during the last five year period as applicable	2011-12-- 30 lac T, 2012-13-- 30 lac t, 2013-14-- 45 lac t, 2014-15-- 45 lac t, 2015-16--45 lac t	2011-12-- 19,26,941T, 2012-13-- 22,60,827 t, 2013-14-- 16,04,619 t, 2014-15-- 24,35,382 t, 2015-16-- 23,77,543 t	
3q	General remarks of inspecting officers on method of mining etc.	Not applicable	The desired production has not been acheived and decrease of production due to various reasons like market conditions, plant under trial & Shut down etc.	

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Seperate dumping of top soil, O/B and mineral rejects Proposed.	Being done	
4b	Location of topsoil, OB and mineral reject dumps	Block - I & II	Block - I & II	
4c	Number of dumps within lease area and outside of lease area	Three dumps within lease hold area.	Three dumps within lease hold area.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Out side UPL.	Being done	
4e	Number of active and alive dumps.	TWO	TWO	
4f	Number of dead dumps.	one	one	
4g	Number of dumps established.	Two	Two	
4h	Whether Retaining wall or garland drain all along dumps are there.	Garland Drain/ Retaining wall.	Being done	
4i	Length of Retaining wall or garland drain all along dumps	200 Mtrs	185 Mtrs	
4j	Number of settling ponds	Not specified	Not applicable	
4k	Specific comments of inspecting officer on waste dump management	Not applicable	The general house keeping of Waste dumps is satisfactory.	

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.	Full extraction confirm by drill hole cutting samples.	Being done	

5b	Area under backfilling of mined out area	16.0 ha	4.05 ha
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	For Plantation.	Being done
5d	Total area fully reclaimed and rehabilitated	1.5 ha	3.0 ha
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Not applicable	It was proposed to cover an area of 5.67 ha under afforestation on backfilled area, where as only 4.5 ha had been covered under backfilling.

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 to be submitted.	Annual report for 2015-16 had not been submitted.	
6b	Area available for rehabilitation (ha) .	1.5 ha	3 ha	
6c	afforestation done (ha).	1.5 ha	2.5 ha	
6d	No. of saplings planted during the year	4000 Nos.	5070 Nos.	
6e	Cumulative no .of plants	Not Specified.	1,31,617 Nos.	
6f	Any other method of rehabilitation	Not specified	Not applicable	
6g	Cost incurred on watch and care during the year	Rs. 8,00,000/-	Rs. 9,44,000/-	

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	13.69 Ha	6 Ha
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	43,61,625 Tonnes	17,,91,042 Tonnes
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	1.5 ha	Total 4.5 ha as on date of Inspection.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not specified	0.58 ha
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	None
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No specific proposals made.	Total 4.5 ha
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No specific proposals made for waste land.	4.5 ha Cumulative
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No specific proposals made for waste land.	Plantation

6p	Compliance of environmental monitoring (core zone and buffer zone)	As per E.C. & Consent condition noise & Air quality monitoring six monthly basis and water quality monitoring at quaterly interval proposed.	Being done
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Not applicable	The annual compliance report (2015-16) of the work in mine actually carried out vis - a - vis to the proposals of approved progressive mine closure plan for mineral conservation & mine rehabilitation required to be submitted up to 1 July 2016 to the Regional Controller has not been submitted till date.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	45,00,000 Tonnes	23,77,543 Tonnes	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	By Excavator	
7c	Different grade of mineral sorted out at mines.	Cement grade, Sub Grade & waste Rock.	Being done	
7d	Any beneficiation process at mines	Dry beneficiation through two stage double deck vibrating screen.	Being done	

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Not applicable	The mineral conservation and beneficiation operations carried out at site is satisfactory.
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Removal -- 1,00,930 Cu M, Utilisation -- 1,00,930 Cu M	Removal -- 1,35973 Tonnes, Utilisation -- 1,35,933 Tonnes	
8b	Concurrent use or storage of topsoil	Not specified	Concurrent use in plantation.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Seperate dumps for O/B waste & rejects over an area of 14217 Sq M.	About 2500 Sq M with total quantity of about 65000 Tonnes.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	As on 1/4/2016, 40,61,622 Tonnes proposed.	About 22,46,671 Tonnes	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	16.10 ha proposed.	4.5 ha up to 31/3/2016	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)			
8g	Survival rate	80%	Yet to be calculated.	

8h	Water sprinkling on roads to control airborne dust	Wet drilling & water spraying on haulage roads through water tankers.	Being done
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Not applicable	The aesthetic beauty in & around mines is good.

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 August 2016 & A/R submitted up to 2015-16.	M/R submitted up to August 2016 & A/R submitted up to 2015-16.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Yes details given in A/R.	Found O.K.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Yes details given in A/R.	Found O.K.	
9d	Scrutiny of Annual return on afforestation	Yes details given in A/R.	Found O.K.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Yes details given in A/R.	Found O.K.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Yes details given in A/R.	Found O.K.	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Yes details given in A/R.	Found O.K.	
9h	Scrutiny of Annual return on fixed assets	Yes details given in A/R.	Found O.K.	

9k Scrutiny of Yes details Found O.K.
Annual return on given in A/R.
mining
machineries

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
Rule 13(1)	27-SEP-16				
Rule 23E(2)	27-SEP-16				

Date :**(Sharma H.C.)**

Indian Bureau of Mines