

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

MCDR INSPECTION REPORT

Gandhinagar regional office

Mine file No : RAJ/UDP/R.Ph.-1

Mine code : 46RAJ26003

- (i) Name of the Inspecting : **S012**) **H C SHARMA**
Officer and ID No.
- (ii) Designation : Assistant Controller Mine
- (iii) Accompanying mine : Sh. Yogesh Vyas, Senior Manager (Mines)
Official with
Designation
- (iv) Date of Inspection : 07-NOV-19
- (v) Prev.inspection date : 30-DEC-18

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **JHAMARKOTRA**
- (b) **Registration NO.** : **5158**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
State : RAJASTHAN
District : UDAIPUR
Village : JHAMARKOTRA
Taluka : GIRWA
Post office : JHAMARKOTRA MINES
Pin Code : 313015
FAX No. : 0294-2342444
E-mail : jkt.rsmml@rajasthan.gov.in
Phone : 0294-2428741-43,9414163346
- (f) Police Station : JHAMARKOTRA
- (g) First opening date : 01-JUN-68
- (h) Weekly day of rest : MON
2. Address for : Jhamarkotra Rock phosphate Mine
correspondance : village-jamarkotra,tehsil-girwa
UDAIPUR(RAJ)
3. (a) Lease Number : RAJ0626
- (b) Lease area : 1370.37
- (c) Period of lease : 30
- (d) Date of Expiry : 24-JUN-31
4. Mineral worked : DOLOMITE Associated
ROCK PHOSPHATE Main

5. Name and Address of the

Lessee : RSMM Ltd.
 4-Meera Marg Udaipur
 UDAIPUR RAJASTHAN
 Phone:
 FAX :

Owner : Somnath Sharma, IAS
 M/S RSMM Ltd. 4- Meera
 Marg, Udaipur UDAIPUR
 RAJASTHAN
 Phone:
 FAX :

Agent : Mukesh Chaturvedi
 M/S RSMM Ltd., Jhammerkotra
 Mine, Village-
 Jhammarkotra, Tehsil-Girwa
 Udaipur UDAIPUR RAJASTHAN
 Phone:
 FAX :

Geologist

Name : Rajesh Samar, Full Time
 Qualification : M.Sc(Geology)
 Appointment/ : 01-JUL-16
 Termination date

Manager

Name : Yogesh Vyas
 Qualification : B. E. Mining
 Appointment/ : 26-DEC-18
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	12-SEP-03
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	01-SEP-08
		Mining Scheme rule 12 MCDR1988	10-SEP-13
		MP review under 17(1) MCR 2016	06-JUL-18

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	
1b	Exploration over lease area for geological axis 1 or 2	5000 meters during scheme period 2013-18. The exploration work completed in March 2017 & reseves reassessment proposed.	6900.2 meters during scheme period 2013-18. The exploration work completed in March 2017 & reseves reassessed in G1 category.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal	Not applicable	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Not applicable	
1e	Balance reserve as on 01/04/20	HGO- 5.575 million tonnes, LGO- 17.420 million tonnes as on 1/4/2019.	HGO- 5.575 million tonnes, LGO- 17.420 million tonnes as on 1/4/2019.	
1f	General remarks of inspecting officers on geology, exploration etc	Not applicable	No issue regarding exploration.	

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	In central pit between grid lines 2970E to 7030E & 3750N to 5980N.	AS per proposals	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes separate bench in Overburden waste & in Mineral.	Yes separate bench in Overburden waste & in Mineral.	

2c	Stripping ratio or ore to OB ratio	1 : 17.09	1 : 20.03
2d	Quantity of topsoil generation in m3	Nil	Not applicable
2e	Quantity of overburden generation in m3	267.50 lac MT	206.65 Lac MT
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Not applicable	The mine had been worked adopting highly mechanised open cast method which is suitable to the type of deposit.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Central Pit & western pit	Central Pit & western pit	
3b	Quantity of ROM mineral production proposed	1580000 MT	1031797.50 MT	
3c	Recovery of sailable/usable mineral from ROM production	Not specified	HGO is 100% salable & LGO is beneficiated & weighted recovery is 37%.	
3d	Quantity of mineral reject generation	Nil	Not applicable	
3e	Grade of mineral rejects generation and threshold value declared.	Not applicable	Not applicable	
3f	Quantity of sub grade mineral generation.	1.5 lac MT approximate	597763 MT	
3g	Grade of sub grade mineral generation	Not defined in the proposals	From 5 to 15 % P205	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	There is R7D project for explore possibility of use of Sub grade Ore.	Intially IBM carried out Pilot Scale study for beneficiation of this subgrade ore. There after beneficiation or direct sale both proposals are under consideration of management of RSMM Ltd.
3j	Provision of drilling and blasting in mineral benches	Yes	Yes
3k	Provision of mining machineries in mineral benches	Combination of Shovel & dumper proposed.	Combination of Shovel & Dumper deployed.
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	338.35 ha	315.94 ha
3n	Ore to OB ratio for the pit/mine during the year.	1 : 17.09	1 : 20.03
3o	Total area put in use under different heads at the end of year	Under excavation- 338.35 ha, mineral storage 27.30 ha, waste dumping- 333.47 ha, Infrastructure - 61.69 ha, Green Belt- 105.280 ha	Under excavation- 315.94 ha, mineral storage 25.62 ha, waste dumping- 289.97 ha, Infrastructure- 64.37 ha, Green Belt- 105.280 ha
3p	Production of ROM mineral during the last five year period as applicable	2014-15-- 17.62 lac MT, 2015-16-- 17.61 Lac MT, 2016-17-- 17.63 Lac MT, 2017-18-- 17.62 Lac MT, 2018-19-- 15.80 Lac MT.	2014-15-- 13.66 lac MT, 2015-16-- 12.97 Lac MT, 2016-17-- 3.41 Lac MT, 2017-18-- 12.31 Lac MT, 2018-19-- 10.32 Lac MT.

3q General remarks Not applicable The open cast method of inspecting officers on method of mining etc. with use of HEMM is used for carrying out mining operations in the lease area.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No top soil & reject. O/B dumping in Foot wall side proposed.	No top soil & reject. O/B dumping in Foot wall side done.	
4b	Location of topsoil, OB and mineral reject dumps	O/B Dumping from 1380E to 2580E & 4290 N to 5530N in western pit. In central pit from 3010E to 6500 E and 2900 N to 5100N.	As per proposals.	
4c	Number of dumps within lease area and outside of lease area	Total 5 Dumps proposed	Total 5 Dumps	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	In Foot wall side out side UPL.	In Foot wall side out side UPL.	
4e	Number of active and alive dumps.	Five	Five	
4f	Number of dead dumps.	Nil	Nil	
4g	Number of dumps established.	Nil	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall of 400 m proposed.	Retaining wall not constructed.	Pointed out as VL.
4i	Length of Retaining wall or garland drain all along dumps	400 m	Nil	
4j	Number of settling ponds	Nil	Not applicable	

4k	Specific comments of inspecting officer on waste dump management	Not applicable	The proposed retaining wall has not been constructed.
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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	Not applicable	
5b	Area under backfilling of mined out area	No proposal	Not applicable	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	Not applicable	
5d	Total area fully reclaimed and rehabilitated	No proposal	Not applicable	
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Not applicable	There is no matured area for reclamation & rehabilitation.	

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).	Yes as per rule	The annual report for the year 2017-18 had been submitted, but the report on PMCP for the year 2018-19 required to be submitted before Ist July 2019 has not been submitted.	It is pointed out as VL.
6b	Area available for rehabilitation (ha) .	No proposal	Not applicable	

6c	afforestation done (ha).	7.5 ha	15.60 ha
6d	No. of saplings planted during the year	7500 nos	15350 nos
6e	Cumulative no .of plants	37500 nos	15530 nos
6f	Any other method of rehabilitation	Not proposal	Not applicable
6g	Cost incurred on watch and care during the year	Rs. 1497500/-	Rs. 906250/-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No proposal	Not applicable
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal	Not applicable
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	No proposal	Not applicable
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Not applicable
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	Not applicable
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	Not applicable

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	Not applicable
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	Not applicable
6p	Compliance of environmental monitoring (core zone and buffer zone)	Compliance of environmental monitoring in core & buffer zone regularly proposed.	Being done
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Not applicable	The lessee's conduct towards implementation of PMCP was satisfactory.

Mineral Conservation:

Sl.No.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	No dispatch Proposals.	HGO- 1262116.83 MT LGO-- 724521.00 MT.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanized	Mechanized	
7c	Different grade of mineral sorted out at mines.	For HGO- Non single Super Phosphate & Single super Phosphate. For LGO- Beneficiated Rock Phosphate & Rajphos.	Being maintained as per proposals.	
7d	Any beneficiation process at mines .	LGO processed at Industrial Beneficiation Plant proposed.	LGO processed as proposed.	

7e General remarks Not applicable There is no mineral
of inspecting conservation issue.
officer on
Mineral
conservation and
beneficiation
issues

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No top soil excavation proposed.	Not applicable	
8b	Concurrent use or storage of topsoil	Not applicable as there is no top soil.	Not applicable	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	There is no top soil & mineral reject. O/ B Waste & subgrade proposed to be stacked seperately.	There is no top soil & mineral reject. O/ B Waste & subgrade stacked seperately.	
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	Not applicable	

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	5000 number of plants were proposed in central pit dump during 2018-19. Also 7500 plants proposed each year of SOM plan period on barren land.	Total 15530 planted over 15.6 ha in barren land during 2018-19 with survival rate of 82%. A total of 4069296 planted in total of 142.65 ha area from 1982-83 to 2016-17 so far. with 40% survival.
8g	Survival rate	No proposal	48 % during SOM period & 82% during 2018-19.
8h	Water sprinkling on roads to control airborne dust	Main haulage road have installed with auto matic sprinklers. Other roads proposed for water sprinkling by Water tanker fitted sprinkler.	Being done as proposed.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Not applicable	The general aesthatic beauty in & around the mine was satisfactory.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Not applicable	The M/R submitted up to November 2019. The A/R submitted for the year 2018-19	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	The Manager- Sh. Yogesh Vyas, Geologist- Sh. Rajesh Samar & Mining Engineer- Sh. S. K. Mittal	The Manager- Sh. Yogesh Vyas, Geologist- Sh. Rajesh Samar & Mining Engineer- Sh. S. K. Mittal	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under excavation - 315.94 ha, Waste disposal- 289.97 ha, Plant & building 64.37 ha, Plantation & mineral stack-- 105.28 ha.	Found in order.	
9d	Scrutiny of Annual return on afforestation	15350 plante with survival rate of 82% within lease area.	15350 plante with survival rate of 82% within lease area.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	597763 T of grade 5- 13 % P205.	597763 T of grade 5- 13 % P205.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	opening stack 7825.000 T, Production - 1031797.500 T & closing stack 86065.88 T	Found in order.	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	The Ex- Mine price of HGO above 30% P205- Rs. 4894.93, Above 25% to 30% P205- 4052.87 & LGO upto 20% P205- Rs. 508.71 per tonnes. Production cost given as Rs. 5365.45 per Tonne.	Found in order.	
9h	Scrutiny of Annual return on fixed assets	The value of Fixed assets stated as Nil in item 1. of Part II A where as the depreciation during the year 2018-19 has been stated as Rs. 2423370462.00.	The value of Fixed assets can not be Nil. The correct value of Fixed assets need be given, then only its depreciation should be calculated & shown.	It is pointed out as VL.

9k	Scrutiny of Annual return on mining machineries	The detailed list of mining M/C's deployed in the mine had been given.	Found in Order.
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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 :**(H C SHARMA)**

Indian Bureau of Mines