

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

MCDR INSPECTION REPORT

Ajmer regional office

Mine file No : RAJ/JSL-13/LST-1

Mine code : 38RAJ14002

- (i) Name of the Inspecting : **S012**) **Sharma H.C.**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Sh. Rajendra Menaria, DGM (Mines)
Official with
Designation
- (iv) Date of Inspection : 05/02/2021
- (v) Prev.inspection date : 09/10/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **SANU (1000HECT.)**
- (b) **Registration NO.** : **IBM/5158/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : RAJASTHAN
District : JAISALMER
Village : JOGA
Taluka : JAISALMER
Post office : SANU
Pin Code : 345001
FAX No. : 02992-251394
E-mail : sanumines@yahoo.co.in
Phone : 02992-270283
- (f) Police Station :
- (g) First opening date : 19/03/1987
- (h) Weekly day of rest : SUN
2. Address for : P.BOX NO.56,
correspondance : KHANIJ BHAWAN
JAISALMER
3. (a) Lease Number : RAJ1485
- (b) Lease area : 998.4
- (c) Period of lease : 30
- (d) Date of Expiry : 30/03/2047
4. Mineral worked : LIMESTONE Main
LIMESHELL Associated

5. Name and Address of the

Lessee : RAJASTHAN STATE MINES & MINERALS LTD.
 RSMM LTD., GYPSUM DIVN.
 SADUL CLUB BUILDING,
 BIKANER BIKANER RAJASTHAN
 Phone:0151-2523295, 2544178, 2542291, 2542133
 FAX :0151-2523519

Owner : Vikas Sitaramji Bhale
 Rajasthan State Mines &
 Mineral Ltd 4 Meera Marg,
 Udaipur, Rajasthan UDAIPUR
 RAJASTHAN
 Phone: 9414320130
 FAX :

Agent : D D SHRIPAT
 8 WEST PATEL NAGAR, JODHPUR
 JODHPUR RAJASTHAN
 Phone:
 FAX :

Manager
 Name : Rajendra Menaria
 Qualification : BE(Mining)
 Appointment/ : 10/04/2018
 Termination date

| | | | |
|-------------------------------|---|--------------------------------|------------|
| 6. Date of approval of Mining | : | Existing rule 11 MCDR1988 | 14/06/1991 |
| Plan/Scheme of Mining | | Mining Scheme rule 12 MCDR1988 | 20/08/1997 |
| | | Mining Scheme rule 12 MCDR1988 | 04/02/2002 |
| | | Mining Scheme rule 12 MCDR1988 | 17/06/2003 |
| | | Mining Scheme rule 12 MCDR1988 | 04/09/2006 |
| | | Mining Scheme rule 12 MCDR1988 | 27/05/2008 |
| | | Mining Scheme rule 12 MCDR1988 | 13/09/2012 |
| | | MP review under 17(1) MCR 2016 | 13/12/2016 |
| | | MP modif under 17(3) MCR 2016 | 05/12/2018 |

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 | No proposal | Nil | |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | No proposal | Nil | |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | No proposal | Nil | |
| 1e | Balance reserve as on 01/04/20 | Not specified | 14.482 million MT | |
| 1f | General remarks of inspecting officers on geology, exploration etc | Not applicable | The entire lease area has been explored under G1 category at 200 X 200 m grid. | |

Development :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|--|---|---------|
| 2a | Location of development w.r.t.lease area | 4552-5180N,7268-7965E North Block 400-844N,7620-8272E South Block | 4500-5050N, 7300-7950E North Block 550-1200N, 7800-8100E South Block | |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | Only single bench mining. SMS grade limestone found at maximum depth of 6 mtrs from surface. | Being done | |
| 2c | Stripping ratio or ore to OB ratio | No overburden, deposit is outcrop on surface. | Not applicable as surface deposit. | |

| | | | |
|----|---|---|---|
| 2d | Quantity of topsoil generation in m3 | No top soil, deposit is outcrop on surface. | Nil |
| 2e | Quantity of overburden generation in m3 | No overburden, deposit is outcrop on surface. | Nil |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | Not applicable | The mineral is outcropping & opencast method with use of HEMM adopted for carrying out mining operations. |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|--|---|
| 3a | Number of pit proposed for production | Two | Two | |
| 3b | Quantity of ROM mineral production proposed | 3304000 MT | 2631526 MT | |
| 3c | Recovery of sailable/usable mineral from ROM production | Recovery of Finished product i.e. 30mm to 80mm size is 47% Chemical Composition CaO = 54.26 % SiO2 = 1.15 % | Actual Recovery of Finished product i.e. (30-80mm size is 45.80% Chemical Composition CaO = 54.05 % SiO2 = 1.19 % | |
| 3d | Quantity of mineral reject generation | 1277000 MT | 1162555 MT | |
| 3e | Grade of mineral rejects generation and threshold value declared. | CaO = 41.25 % SiO2 = 14.30 % | CaO = 44.25 % SiO2 = 12.49 % | Threshold value of SMS Gr Limestone is CaO-39% SiO2-14.8% |
| 3f | Quantity of sub grade mineral generation. | 413000 MT | 279182 MT | |
| 3g | Grade of sub grade mineral generation | CaO = 53.65 % SiO2 = 1.58 % | CaO = 51.38 % SiO2 = 1.62 % | Subgrade mineral is generated as by-product and having size between 10 mm to 30mm size gitty. |

| | | | |
|----|--|--|---|
| 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. | No proposal | None |
| 3j | Provision of drilling and blasting in mineral benches | Drilling is done with help of 4" dia drill machine and Blasting is done with ANFO by using controlled blasting techniques DTH & TLD. | Being done |
| 3k | Provision of mining machineries in mineral benches | Excavator with 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 | 32.90 Hect | 27.29Hect |
| 3n | Ore to OB ratio for the pit/mine during the year. | Not applicable as mineral is outcropping. | Not applicable |
| 3o | Total area put in use under different heads at the end of year | Area for Mining= 32.90 Backfilling= 28.69 Plantation= 25.00 Road, building= 9.69 C&S plant, storage=4.50 | Area for Mining=27.29 Backfilling=22.35 Plantation=21.40 Road, building= 9.69 C&S plant, storage= 4.50 |

| | | | |
|----|--|---|---|
| 3p | Production of ROM mineral during the last five year period as applicable | 2014-15-- 2700000 MT,2015-16-- 2700000MT 2016-17-- 2700000MT, 2017-18-- 2700000 MT 2018-19-- 3304000 MT, 2019-20-- 3304000 MT. | 2014-15--2137593 MT,2015-16-- 1936097 MT, 2016-17-- 2084683 MT, 2017-18-- 2685196 MT 2018-19-- 2725921 MT, 2019-20-- 2631526 MT. |
| 3q | General remarks of inspecting officers on method of mining etc. | Not applicable | Low production due to Low Market demand. |

Solid Waste Management - Dumping:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|-------------|----------------|---------|
| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | No proposal | Not applicable | |
| 4b | Location of topsoil, OB and mineral reject dumps | No proposal | Not applicable | |
| 4c | Number of dumps within lease area and outside of lease area | No proposal | Not applicable | |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | No proposal | Not applicable | |
| 4e | Number of active and alive dumps. | No proposal | Not applicable | |
| 4f | Number of dead dumps. | No proposal | Not applicable | |
| 4g | Number of dumps established. | No proposal | Not applicable | |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | No proposal | Not applicable | |

| | | | |
|----|--|----------------|---|
| 4i | Length of Retaining wall or garland drain all along dumps | No proposal | Not applicable |
| 4j | Number of settling ponds | No proposal | Not applicable |
| 4k | Specific comments of inspecting officer on waste dump management | Not applicable | It is surface deposit with outcropping mineral. |

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. | Yes, Full extraction of SMS Grade Mineral from mined out area before starting backfilling. | Yes, Full extraction of SMS Grade Mineral from mined out area before starting backfilling. | |
| 5b | Area under backfilling of mined out area | 27.29ha | 22.35ha | |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | No proposal | Nil | |
| 5d | Total area fully reclaimed and rehabilitated | Earlier backfilled area as on 01.04.20 = 278.19 Ha Plantation over backfilled, mined out & virgin area as on 1.4.20=177.82Hect Proposed during FY 2019-20 Backfilling= 28.69 Plantation= 25.00 | Actual carried out during FY 2019-20 Backfilling=22.35 Plantation=21.40 | |

5e General remarks Not applicable As on 31.03.20,
of inspecting 278.19Hectarea is
officers on reclaimed & 177.82Hect
backfilling and with plantation in mined
reclamation etc. out backfilled area.

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 | Not submitted. | |
| 6b | Area available for rehabilitation (ha) . | 32.90Hect | 27.29Hect | |
| 6c | afforestation done (ha). | No proposal | Not applicable | |
| 6d | No. of saplings planted during the year | 6500 nos | 5500 nos | |
| 6e | Cumulative no .of plants | Not specified | 77722 nos | |
| 6f | Any other method of rehabilitation | No proposal | None | |
| 6g | Cost incurred on watch and care during the year | Rs. 10 Lacs | Rs. 13.80 lacs. | |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D | 27.29 Ha | 22.35 Ha | |
| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings | No waste/ tailings generated | Nil | |

| | | | | |
|----|---|--|--|--|
| 6j | Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on on backfilled area | 20 Ha | 21.40 ha | |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir | No proposal | Nil | |
| 6l | Compliance on reclamation and rehabilitation by backfilling (v) any other specific means. | No proposal | None | |
| 6m | Compliance of rehabilitation of waste land within lease (i) afforestation | No proposal | Nil | |
| 6n | Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha) | No proposal | Nil | |
| 6o | Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation | No proposal | Nil | |
| 6p | Compliance of environmental monitoring (core zone and buffer zone) | As per MOEF & Consent condition of SPCB. | Being done | |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | Not applicable | The implementation of PMCP proposals was satisfactory. However VL of rule 11 (1) has been pointed out for less number of plantation in the mine. | |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

| | | | |
|----|--|---|--|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | Production Proposal:- 1500000 (30-80mm) 413000 (10-30 mm) Likely to Despatch:- 1250000 (30-80mm) 300000 (10-30 mm) | Actual Production:- 1189790 (30-80 mm) 279182 (10-30 mm) Actual Despatch:- 1175980 (30-80 mm) 214270 (10-30 mm) |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | Mechanical | Mechanical |
| 7c | Different grade of mineral sorted out at mines. | Yes, different grade separated by screening at plant was as under:- 40-80mm size gitty 30-60mm size gitty 30-50mm size gitty 10-30mm sizegitty. | Being done |
| 7d | Any beneficiation process at mines | No proposal | None |
| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | Not applicable | Mineral processing is carried out by dry processing only. |

Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|-------------------------------|-------------------------------|---------|
| 8a | Separate removal and utilization of topsoil (Rule 32) | No top soil, surface deposit. | No top soil, surface deposit. | |

| | | | |
|----|---|--|--|
| 8b | Concurrent use or storage of topsoil | No top soil, surface deposit. | None |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Low grade rejects generated during the crushing & screening process and backfilled in mined out pits. | Being done, these low grade reject may be used in future for cement mining plants. |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | Mineral rejects & fine is dumped in mined out area & for backfilling. | Being done |
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | Area used for Plantation (fire-wood plant), for natural water reservoirs & backfilled by clayey soil of low grade fines. | Being done |
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | 6500 Nos. per year | 5500 Nos. during 2019-20 |
| 8g | Survival rate | 100% | 70% |
| 8h | Water sprinkling on roads to control airborne dust | Yes | Yes, Water tanker with sprinkler deployed for the purpose. |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | Not applicable | The general aesthetic beauty in & around the mine was satisfactory. |

Compliance of Rule 45:

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

| | | | |
|----|---|---|--|
| 9a | Status of submission of Monthly and Annual returns | Not applicable | M.R. submitted up to Jan.2021 A.R. Submitted for 2019-20. |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Yes, provided. Graduate Mining Engineer = 2 Diploma Mining Engineer = 1 Geologist Partially Employed=1 Surveyor = 1 Other Technical & Supervisory staff = 13 | Found in order |
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Total Land Area Status as on 01.04.2020 Area for Mining = 561.38 Backfilling = 278.19 Plantation = 177.82 Road, building= 9.69 C&S plant, storage= 4.50 | Found in order |
| 9d | Scrutiny of Annual return on afforestation | Details given | Found in order. |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | Low grade rejects fines generated with grade: CaO = 44.25 % SiO2 = 12.49 % Quantity = 1053304 MT | Found in order |
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | Total production of ROM is 2631526 MT | Found in order |

| | | | |
|----|---|---|----------------|
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Total sale value of mineral (Main Grade & Sub Grade)= Rs. 872171241/- Ex mine price of Finished product (30-80mm size) gitty= Rs. 465.44 PMT Ex mine price of Subgrade/byproduct (below 30mm size) gitty= Rs. 295.11 PMT Production Cost: Rs. 417.94 PMT | Found in order |
| 9h | Scrutiny of Annual return on fixed assets | Value of Fixed Asset: Rs. 9,91,17,804/- | Found in order |
| 9k | Scrutiny of Annual return on mining machineries | Detailed list of M/C deployed given. | Found in order |

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 :

(Sharma H.C.)

Indian Bureau of Mines