INDIAN BUREAU OF MINES
MINERALS DEVELOPMEMT AND REGULATION DIVISION

Inspection under SDF for star rating of mines REPORT

Bangalore regional office

Mine file No : KNT/GLB/LST/17/BNG **Mine code : 38KAR10003**

(i) Name of the Inspecting Officer and ID No. : **A101) ARUN KUMAR**

(ii) Designation : Deputy Controller Mines

(iii) Accompaning mine Official with Designation : Shri Shiojee Roy - Manager cum Mining Engineer & Shri

(iv) Date of Inspection : 16/12/2019

(v) Prev.inspection date : 14/12/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **INJEPALLI (ML 2417 AND 2475)**

(b) Registration NO. : **IBM/245/2011**

(c) Category : A Fully Mechanised

(d) Type of Working : Opencast

(e) Postal address

State : KARNATAKA
District : GULBARGA
Village : INJEPALLI
Taluka : SEDAM
Post office : SEDAM
Pin Code : 585222
FAX No. : 033-221094 (F)
E-mail : mines@vasavadattacement.co
Phone : 08441-276005,EXT.406/524 0

(f) Police Station : Sedam

(g) First opening date : 09/12/1982

(h) Weekly day of rest : SUN

2. Address for correspondance : M/s KESORAM INDUSTRIES LIMITED,M/s Vasavadatta C
At & po-Sedam
Dist-Gulbarga, Karnataka-585 222

3. (a) Lease Number : KAR0099
(b) Lease area : 897.86
(c) Period of lease : 20
(d) Date of Expiry : 04/09/2023

4. Mineral worked : SHALE Associated
LIMESTONE Main

5. Name and Address of the

Lessee : VASAVADATTA CEMENTS
SEDAM, GULBARGA, GULBARGA
KARNATAKA
Phone:08441-676005,676277,676256
FAX :08441-676139,676408

Owner : Tridib Kumar Das
Birla Building, 8th Floor,
9/1, R.N Mukherjee Road,
Kolkata KOLKATA WEST
BENGAL
Phone:
FAX :

Agent : RAVINDRA LAGWANKAR
Vasavadatta Cement Sedam-
585222 kalburgi GULBARGA
KARNATAKA
Phone: 03322435453
FAX :

Mining Engineer

Name : SHIOJEE ROY,Full Time

Qualification : BE Mining, First Class Mines manager Cer

Appointment/ Termination date : 01/05/2018

Geologist

Name : B.S.VINAYAKA,Full Time

Qualification : M.SC GEOLOGY

Appointment/ Termination date : 15/04/2013

Manager

Name : RAVINDRA LAGVANKAR

Qualification :

Appointment/ Termination date : 09/02/2006

6. Date of approval of Mining Plan/Scheme of Mining :

Existing rule 11 MCDR1988	13/02/1992
Mining Scheme rule 12 MCDR1988	24/09/1996
Renewal under rule 22 MCR1960	27/11/2002
Fresh under rule 22 MCR1960	20/07/2004
Mining Scheme rule 12 MCDR1988	11/08/2006
Modif.approved Mining Scheme	22/04/2010
Mining Scheme rule 12 MCDR1988	04/01/2013
MP review under 17(1) MCR 2016	29/11/2016
MP modif under 17(3) MCR 2016	15/12/2017

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No Proposal	Nil	31 core bore holes amounting to 1518 Meters were drilled in FY 2015-16. No back logs.
1b	Exploration over lease area for geological axis 1 or 2	G1,G2 & G3	G1- 258.58 Ha. G2- 409.30 Ha. G3- 229.98 Ha.	As per Approved Modified RMP dtd 15.12.2017.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No Proposal	Nil	50 CBH (2165 Mtrs) & 55 CBH (1980 Mtrs) at grid interval of 200 x 200 Mtrs proposed in the FY 2020-21 & 2021-22.
1d	Balance area to be explored to bring Geological axis in 1 or 2	G1	4145 Mtrs with 105 CBH proposed to be drilled in coming years to convert G2 & G3 level into G1 category	639.28 Ha is proposed to convert into G1 category in FY 2020-21 & 2021-22
1e	Balance reserve as on 01/04/20	Nil	Limestone-280.00 Million Tons, Shale-53.00 Million Tons.	As per Annual Return 2018-19
1f	General remarks of inspecting officers on geology, exploration etc			109 CBH with 4324 total meterage were drilled so for. 639.28 Ha is proposed to convert into G1 category in FY 2020-21 & 2021-22

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Pit- A: N 1200-870 & E-328 - 1119.	Actual working : N 1218-853 & E-344 TO 110	In between section lies C-C'to F-F'
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in OB & Mineral proposed.	Maintained Separate benches for OB & Mineral	Benches in OB-1 & Mineral-5

2c	Stripping ratio or ore to OB ratio	1:0.028 (Limestone)	1:0.043	Bulk density : Limestone 2.5 MT/ Cum and Soil is 1.6 MT/Cum
2d	Quantity of topsoil generation in m3	2,47,886 Tons	2,69,700 Tons	for the FY 2018-19
2e	Quantity of overburden generation in m3	No proposal	Nil	Nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The development was carried out within the proposed grids as per the approved modified RMP.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2 Pits proposed	Working carried out in two bits ,namely Pit A & Pit B	Pit-A (NE Corner) & Pit-B (SE Corner) of ML Area. Pit -A: RL-422`70 m to 378`10, Pit B: 405.65 to 396.10 m
3b	Quantity of ROM mineral production proposed	Lst - 8750975 Tons, Shale - 498276 Tons	Lst - 6270680 Tons, Shale - 51075 Tons	Clarification sought for (-) 90 % deviation in shale production. Violation issued.
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	Nil
3d	Quantity of mineral reject generation	No proposal	Nil	Nil
3e	Grade of mineral rejects generation and threshold value declared.	Threshold value-CaO : Min 34%,Mgo : Max - 5 %	Entire ROM is utilized in their captive plant	High grade limestone is blended with siliceous limestone.
3f	Quantity of sub grade mineral generation.	No proposal	Nil	No sub-Grade Mineral generated.
3g	Grade of sub grade mineral generation	No proposal	Nil	Nil

3h	Manual / Mechanised method adopted for segregating from ROM	No proposal for segregating from ROM	All the blasted limestone from the face is transported to the crusher located within ML	The crushed material (50mm) is transported through conveyor belt to cement plant located about 2.5 KM from ML.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	No such beneficiation study carried out	Nil
3j	Provision of drilling and blasting in mineral benches	Drilling & blasting proposed in Mineral benches.	Deep hole drilling & blasting carried out in mineral benches as proposed.	Deep Hole Drilling by sandvik DI 500 of 150mm dia. and Blasting by slurry explosive in conjunction with ANFO and NONEL.
3k	Provision of mining machineries in mineral benches	Shovel dumper combination is proposed.	Excavator: 06 No's,Loader:02 No's,Dumper: 19 No's,Drill:02No's	Fully Mechanized mines
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	OB: 1 to 2 Mtr, Mineral: Bench height - 10Mtr & Bench width 50 Mtrs.	OB: 1.5 Mtr, Mineral: Bench height - 10Mtr & Bench width 30 Mtrs.	12mtr height permission from DGMS but maintaining a height of 10mtr maximum
3m	Total area covered under excavation/pits	178.69 Ha at the end of plan period.	150.00Ha. (Actual area at the end of FY 2018-19)	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:0.028 (Limestone)	1:0.043 (Limestone)	Stripping Ratio increased due to less production of mineral against the proposal

3o	Total area put in use under different heads at the end of year	Area under Mining-178.69 Ha, Storage for top soil - 19.72 Ha, Mineral Storage - 2.26 Ha, Infrastructure - 2.95 Ha, Roads- 7.41 Ha, Mineral Separation plant(Crusher) - 0.61 Ha, Others (Green belt) - 11.33 Ha. At the end of plan period.	Covered under current (O/C) Workings- 150 Ha, Reclaimed/rehabilitated (Hydro Reclamation)- 5.23 Ha, Used for waste disposal (Black Cotton Soil)- 16.32 Ha, Occupied by plant, buildings, residential, welfare buildings & roads- 11.09 Ha, Plantation 0.40 Ha(18-19)	Nil
3p	Production of ROM mineral during the last five year period as applicable	2014-15: 09.20 2015-16: 11.70 2016-17: 11.69 2017-18: 09.25 2018-19: 09.25	2014-15: 04.75 2015-16: 05.45 2016-17: 05.40 2017-18: 05.02 2018-19: 06.32	All units in Million Tons. Violation issued for lower production of ROM.
3q	General remarks of inspecting officers on method of mining etc.			The lower side of exploitation was due to less demand of cement in the market. Besides 51,075 tons of shale (minor mineral) was produced during the year 2018-19 against the proposal of 498276 tons. V/L has been issued for necessary clarification

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate stacking of top soil proposed.	Separate stacking of top soil carried out	Bund Formation along NW side near new magazine & of the Lease Boundary.

4b	Location of topsoil, OB and mineral reject dumps	Bund Formation along lease boundary: E174 to 250. S 545 to 625. Location of dump near nallha. E 215 to 295. N 680 to 780.	Bund Formation along lease boundary: E 183 to 212. S 555 to 589. Location of dump near nallha. E 213 to 285. N 688 to 757.	The top soil generated will be used for constructing bund along the ML boundary/acquired land boundary.
4c	Number of dumps within lease area and outside of lease area	Within ML area -4 Nos. Outside ML area- Nil	Within ML area -4 Nos. Outside ML area- Nil	Soil dumps along lease area for Green Belt development
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Inside the UPL	Inside the UPL	Entire area is mineralized.
4e	Number of active and alive dumps.	One	One	Nil
4f	Number of dead dumps.	3 Nos.	3 Nos.	Nil
4g	Number of dumps established.	3 Nos.	3 Nos.	3 dumps stabilized with plantation
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall & Garland drain proposed	RW was available in part of the dump	Garland drain is made at foot of Dump.
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall 378 Mtrs & Garland drain - 380 Mtrs	Retaining wall 110 Mtrs & Garland drain - 710 Mtrs	Retaining wall as proposed was not constructed. Violation issued.
4j	Number of settling ponds	No proposal	NIl	Nil
4k	Specific comments of inspecting officer on waste dump management			The management of top soil dump was satisfactory. Retaining wall was available in part of the dump.V/L issued.

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	Nil	There is no waste for Backfilling. The Generated OB is used for Bund Formation along the Lease Boundary.
5b	Area under backfilling of mined out area	It is proposed to convert the dug out pit into water reservoir	5.23 Ha is converted into water reservoir	As a part of hydro reclamation
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Top soil generated is proposed for bund making along the acquired mine boundary.	Actual work done as per the proposal	Nil
5d	Total area fully reclaimed and rehabilitated	Proposal to convert the dugout pit into water reservoir	5.23 Ha is converted into water reservoir so far.	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.			There is no proposal for back filling as mineral persist at depth. The part of the existing pit is converted into water reservoir.

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 on PMCP to be submitted before 1stJuly every year	PMCP report submitted	Report submitted vide letter no. VC/WS/MINE/VBS/41/ 19-20/207 dtd. 24.06.2019.
6b	Area available for rehabilitation (ha) .	No proposal	Part of the existing pit is being utilized as water reservoir	Nil
6c	afforestation done (ha).	0.44 Ha	0.40 Ha	Nil
6d	No. of saplings planted during the year	3000 saplings proposed.	2977 saplings proposed.	Nil
6e	Cumulative no .of plants	146089	155979	Nil

6f	Any other method of rehabilitation	No proposal	Nil	Nil
6g	Cost incurred on watch and care during the year	Rs.936000/-	Rs.928824 as per PMCP report submitted	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No Proposal	Nil	part of the existing pit 5.23 Ha is being utilized as water reservoir
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No Proposal	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	No Proposal	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposal	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No Proposal	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No Proposal	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No Proposal	NIl	Nil

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No Proposal	NIl	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Season wise environmental monitoring of air, water, dustfall, noise & soil sample analysis proposed in core and buffer zone	Environmental monitoring is done regularly in core and buffer zone regularly.	Seasons wise monitoring carried out by M/s BS Envi Tech Hyd., (NABL). Environmental parameters were observed to be within the permissible limits
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			The leasee has carried out PMCP activities as per the proposal. 2977no's of sampling planted in the lease area.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	All the blasted limestone from the face is proposed to be transported to the crusher for their captive consumption	Direct ROM dispatched to crusher. For their captive cement plant of 6.00 million ton clinker capacity.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No proposal	Bench wise blending of limestone and shale done as per requirement of plant	Nil
7c	Different grade of mineral sorted out at mines.	No proposal	Bench wise blending of limestone and shale done as per requirement of plant	Nil
7d	Any beneficiation process at mines .	No mineral beneficiation proposed	No mineral beneficiation carried out except crushing.	Crusher capacity of 1400 TPH and stand by crusher of 800 TPH

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Beneficiation of limestone is not required as entire limestone excavated is being utilized with proper blending in the cement manufacturing plant.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	The top soil generated is proposed to be utilized for bund making along the acquired lease boundary.	0.143 million cubic meter of top soil is generated during the year 2018-19 was utilized for bund making as proposed.	Nil
8b	Concurrent use or storage of topsoil	Top soil generated was proposed to stacked and utilized for bund making	Bund was made along the acquired boundary with plantation on the top of bund.	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps for overburden proposed	Separate dumps for overburden carried out	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Overburden proposed to be dumped in safety barrier of lease area.	Overburden dumped in safety barrier of lease area.	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	part of the existing pit 5.23 Ha is being utilized as water reservoir	Nil

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Entire ML area is non forest land. Proposed to Plant 3000 no's (1500 Fresh plants & 1500 Gap Filling)	2977 no's samplings were planted covering an area of 0.40 Ha.	Nil
8g	Survival rate	65%	52%	Drought affected region (Dry Land)
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haul roads proposed to control airborne dust.	Regular water sprinkling is carried out static water sprinklers are provide on haul road, unloading station, ramps & view point	NIVIS dust suppression system & Three water tankers of 18KL each provided with rain gun and pressurized sprinkler arrangements and drip irrigation system.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The aesthetic beauty in and around the mine is good as lease has carried out afforestation and other environmental protective measures as per the proposals.

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 Nov 2019 A.R. Submitted up to 2018-2019	A.R. submitted up to 2018-19, on 28.06.2019.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager mining& Mining Engineer: Shiojee Roy Geologist: Vinayaka B S	Same mine officials accompanied during the course of inspction	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Current (O/C) Workings: 150.00 Ha, Reclamation - 5.23 Ha,Dumps- 16.32 Ha, Roads/Infrastr ucture-11.09 Ha, Others (Green Belt)- 0.40 Ha	Appears to be correct
9d	Scrutiny of Annual return on afforestation	WML- 2977 No's @ 52% survival rate OML- 10521 No's @ 52% survival rate.	Appears to be correct
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Limestone: OS- Nil, Production- 6270680 Tons, CS-Nil Shale: OS-Nil, Production- 51075 Tons, CS-Nil	Appears to be correct
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Production cost & Ex-mine price Rs. 159.88 per MT for Limestone Rs. 133.48 per MT for Shale	No sale value this is a captive mine
9h	Scrutiny of Annual return on fixed assets	Rs. 1,365.73 Lakhs including plant machinery and transport equipments.	Appears to be correct

9k	Scrutiny of Annual return on mining machineries	Excavator: 06 No's, Loader:02 No's,Dumper:19 No's,Dozer:02N o's,Drill:02No 's,Water Tanker:03No's, NIVIS water system: 01No's,Bulk Mixing & Delivery Truck:01No's	Appears to be correct

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)		21/01/2020				
MCDR17	Rule 35(2)		21/01/2020				
MCDR17	Rule 11(1)		10/01/2019				
MCDR17	Rule 35(2)		10/01/2019				

Date :

(**ARUN KUMAR**)

Indian Bureau of Mines