

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

MCDR INSPECTION REPORT

Nagpur regional office

Mine file No : MAH/YTL/LST-69 /NGP

Mine code : 38MSH26045

- (i) Name of the Inspecting : **M017**) **ASHISH MISHRA**
Officer and ID No.
- (ii) Designation : Assistant Controller Mine
- (iii) Accompanying mine : SHRI SAI BABU, AGENT & MD
Official with
Designation
- (iv) Date of Inspection : 14/03/2017
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **PATHRI MINE (21.37 HA.)**
- (b) **Registration NO.** :
- (c) Category : B Manual
- (d) Type of Working : Opencast
- (e) Postal address :
State : MAHARASHTRA
District : YEOTMAL
Village : Parhri
Taluka : Ballarpur
Post office : Pathri
Pin Code :
FAX No. :
E-mail :
Phone :
- (f) Police Station :
- (g) First opening date : 15/03/2012
- (h) Weekly day of rest :
2. Address for :
correspondance :
3. (a) Lease Number : MSH0389
- (b) Lease area : 21.67
- (c) Period of lease : 50
- (d) Date of Expiry : 23/11/2061
4. Mineral worked : LIMESTONE Main

5. Name and Address of the

Lessee : M/S SRI BALAJI MINERALS INDUSTRIES
CHANDRAPUR CHANDRAPUR
MAHARASHTRA
Phone:
FAX :

6. Date of approval of Mining : Fresh under rule 22 MCR1960 04/11/2008
Plan/Scheme of Mining Mining Scheme rule 12 MCDR1988 05/08/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil- No backlog for previous years proposals	Not Applicable	3 Boreholes were proposed in the last approved Mining Plan and all boreholes completed. No boreholes were proposed.
1b	Exploration over lease area for geological axis 1 or 2	G 1 & 2 both	G1- 7479500 T (Reserves) G2- 504000 T (Resources)	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Nil	Nil	No exploration done in this year.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Out of total lease area, surface rights for approximately 5 ha area are presently not held by the lessee. Therefore, that part may come under resources, but complete area comes under at least G2 category.
1e	Balance reserve as on 01/04/20	G1- 7479500 T (Reserves) G2- 504000 T (Resources)	G1- 7479500 T (Reserves) G2- 504000 T (Resources)	Reserves/resources as on 01/04/2016 as given in the approved SOM

1f	General remarks of inspecting officers on geology, exploration etc	Future Exploration Proposed as Nil	No exploration carried out	Existing meterage for all the boreholes is 15 m. Thus reserves/resources considered upto 15 m only. But depth persistency may be proved by drilling core bore holes upto economic limits as per MEMC Rules'2015. The work may be done after acquiring the remaining land in the lease area for which surface rights are presently not held by the lessee.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Northern Part of the lease area	As per the proposals	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes	Yes	Development proposals were made in the area where Limestone is outcropping. Therefore, there are benches in ore only. But seperate benches are proposed for the areas where top soil/overburden and mineral will occur.
2c	Stripping ratio or ore to OB ratio	1:0.002	As per propopsals	In the proposed area Limestone is occuring as outcrop so stripping ratio is quite less.

2d	Quantity of topsoil generation in m3	2015-16: 816 cuM 2016-17: 10310 cuM	2015-16: 700 cuM 2016-17: Approximately Nil	For 2015-16 actual production was 500 T and in 2016-17 working has been intermittent (mostly closed due to lack of demand/no user industry available in the area). Thus soil generation has been approximately nil.
2e	Quantity of overburden generation in m3	2015-16: Nil 2016-17: 10310 cuM	2015-16: Nil 2016-17: Approximately Nil	For 2015-16 actual production was 500 T and in 2016-17 working has been intermittent (mostly closed due to lack of demand/no user industry available in the area). Thus soil generation has been approximately nil.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			As on the date of inspection, mine was not working and it was observed through field status and office records that mine has worked in past 2-3 years intermittently (due to lack of demand/no user industry available in the area).

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One existing pit to be expanded	As per the proposals	
3b	Quantity of ROM mineral production proposed	2015-16: 23529 T 2016-17: 20000 T	2015-16: 556 T 2016-17: 70 T (as on date)	

3c	Recovery of sailable/usable mineral from ROM production	2015-16: 20000 T 2016-17: 18000 T (90% clean ore recovery)	2015-16: 500 T 2016-17: 70 T	
3d	Quantity of mineral reject generation	2015-16: 3529 T 2016-17: 1000 T (5%)	2015-16: 28 T 2016-17: Approximately Nil	
3e	Grade of mineral rejects generation and threshold value declared.	Mineral Rejects- below threshold value (CaO<34%)	As per proposals	
3f	Quantity of sub grade mineral generation.	2015-16: Nil T 2016-17: 1000 T (5%)	2015-16: 28 T 2016-17: Approximately Nil	
3g	Grade of sub grade mineral generation	Subgrade - above threshold value mineral having higher silica content (CaO 34-40% Silica >15%)	As per proposals	
3h	Manual / Mechanised method adopted for segregating from ROM	Manual Sorting	As per proposals	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No	No	
3j	Provision of drilling and blasting in mineral benches	Yes	As per proposals	Drilling through Jackhammer drills having 30-40 mm dia and 1.6-1.7 m length is proposed. Accordingly small dia cartridges were proposed for blasting. Same has been followed whenever drilling and blasting was done during the intermittent working.

3k	Provision of mining machineries in mineral benches	Category 'B' Manual Mine-accordingly proposals for manual workings alongwith light machineries	As per the proposals	10 T tippers/trucks, Water Tanker (with sprinkler), jack hammer is the mechanization proposed. Same has been adopted while mining.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Average bench height as proposed is 2.0 m	As per the proposals	Maximum depth is approx 2 m from the surface in the working pit. Thus actual work done is as per the proposals.
3m	Total area covered under excavation/pits	Upto 2016-17: 1.2 ha (approx)	2015-16: 0.6860 ha Afterwards approximately Nil area has been added.	
3n	Ore to OB ratio for the pit/mine during the year.	1:0.001	As per the proposals	very less amount of OB as the working area has mostly outcrops of Limestone.
3o	Total area put in use under different heads at the end of year	Area under Pit: 1.2 ha (approx) OB dumps: 0.2076 ha Office: 0.05 ha Greenbelt: 0.02 ha Total: (approx): 1.4776 ha	Area under Pit: 0.6860 ha (approx) OB dumps: 0.2076 ha Office: 0.0 ha Greenbelt: 0.0 ha Total: 0.8936 ha	
3p	Production of ROM mineral during the last five year period as applicable	2011-12: 17647 T 2012-13: 23529 T 2013-14: 23529 T 2014-15: 23529 T 2015-16: 23529 T	2011-12: 0 T 2012-13: 98 T 2013-14: 10376 T 2014-15: 1211 T 2015-16: 556 T	

3q General remarks of inspecting officers on method of mining etc.

Method of mining is Category 'B'- Manual. There is only one single pit of approx size 80m X 85 m X 2.0 m (depth) which has been worked intermittently and adjacent to the pit, small dump is lying for sorting. But as on date of inspection working is closed.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Yes	No top soil in the worked area as limestone is mostly outcropping. Mineral rejects/ subgrade etc are proposed for manual sorting and separate dumping.	As the mine has worked very less, dump is lying for sorting activity and shall be done as and when the mine restores mining operations.
4b	Location of topsoil, OB and mineral reject dumps	MIneral Rejects generation will be 5% and shall be used for road preparation, Very thin soil cover and no overburden. Soil, if any, shall be stacked in the barrier zone. Dumping of waste shall be in the 7.5 m zone sequentially year-wise.	As per proposals so far	One small dump is lying near the pit. The dump is yet to be sorted manually for separation of subgrade/ mineral rejects/ waste.

4c	Number of dumps within lease area and outside of lease area	One dump for top soil (if required) within the lease along 7.5 m non-mining zone, one dump each for overburden, waste, subgrade low grade limestone and mineral rejects within lease area. No dumping outside mining lease area	As per proposals	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside pit limit within 7.5 m non-mining zone	Nil	One dump is lying adjacent to working pit that is due for sorting. Post sorting, generated material shall be stacked according to the proposals.
4e	Number of active and alive dumps.	One Live Overburden Dump	One Overburden dump (live)	
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.	No Proposal	As the dump lies within pit limit and there is proposal for re-handling of dump, there is no proposal for Garland drain or Retaining wall. There is proposal for shifting the dump into 7.5 m non-mining zone. Along this 7.5 m non-mining zone, garland drain has been constructed and maintained.	During the inspection, it was suggested to construct garland drain all along the lease boundary alongwith retaining wall to avoid any degradation of surrounding agricultural land due to mining activities in the lease area.

4i	Length of Retaining wall or garland drain all along dumps	Nil	Garland drain along the 7.5 m zone for approximately 500 m has been constructed. Dump is within pit limit, thus no garland drain or retaining wall along the dump.	
4j	Number of settling ponds	3 settling tanks are proposed to be constructed in the Northern part of the lease area in 7.5 m non-mining zone in 2016-17 to 2020-21 period	Till date of inspection, no settling tank has been constructed.	
4k	Specific comments of inspecting officer on waste dump management		Lease surroundings are: S & E side: Forest Land N & W side: Agricultural Land	As the present working is in the part of area where Limestone is mostly outcropping, no specific overburden or waste is available in the area. For workings prior to 2016-17, dump near the pit covering approximately 0.2 ha area having approximately 2-3 m height is lying which in-turn shall be re-handled and shifted to 7.5 m non-mining zone after sorting mineral content in form of ore/sub-grade. Garland drain is already constructed along the lease boundary in southern and eastern part.

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No Backfilling is proposed till the conceptual stage	Nil	
5b	Area under backfilling of mined out area	Nil	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Very thin layer of Top soil 0.5-1.0 m is available in the area and shall be utilized when encountered	No top soil encountered till date as Limestone is mostly outcrop. As and when top soil shall be encountered, it shall be spread over the dumps for stabilization.	
5d	Total area fully reclaimed and rehabilitated	Nil	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Working has just started in the area and thus no area is reclaimed or rehabilitated. Top soil has not been encountered and shall be managed as per the proposals as and when excavated. Backfilling has not been proposed in the conceptual plan as the area shall be having very less quantum of waste. The waste/overburden generated shall be stabilized in the 7.5 m non-mining zone.

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	No	Violation of rule 26 (2) of MCDR'2017.

6b	Area available for rehabilitation (ha) .	Nil	Nil	
6c	afforestation done (ha).	Till 2015-16: Nil as the mine was in development stage 2016-17 to 2020-21: 0.1 ha	As on the date of inspection, plantation done in the area is Nil.	During inspection, representative from lessee asked that as the area is mostly having outcrops, it is being difficult to achieve plantation targets. In the S-E part, area identified and suggested to start plantation in that zone as the area was having some soil.
6d	No. of saplings planted during the year	25	Nil	As the mine was in the development phase and area is devoid of fertile soil (in the part for which surface rights are held by the lessee) and also due to intermittent working, plantation could not be done. Backlog shall be covered in the 2016-17 to 2020-21 period.
6e	Cumulative no .of plants	125	Nil	As the mine was in the development phase and area is devoid of fertile soil (in the part for which surface rights are held by the lessee) and also due to intermittent working, plantation could not be done. Backlog shall be covered in the 2016-17 to 2020-21 period. Proposal for 2016-17 to 2020-21 is 200 saplings per year.

6f	Any other method of rehabilitation	No	Nil	
6g	Cost incurred on watch and care during the year	Approximately Rs 1,13,000/- (as per the SOM for 2016-17 to 2020-21)	Out of the proposals, only expenditures have incurred on construction of garland drain.	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Nil	Nil	No area available or proposed for backfilling
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	Nil	Nil	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	Nil	Nil	

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No waste land available in the lease area. 25 saplings each year proposed in the Mining Plan for 202011-12 to 2015-16 and 200 saplings in 2016-17 to 2020-21	Nil	As the mine was in the development phase and area is devoid of fertile soil (in the part for which surface rights are held by the lessee) and also due to intermittent working, plantation could not be done. Backlog shall be covered in the 2016-17 to 2020-21 period. Proposal for 2016-17 to 2020-21 is 200 saplings per year.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No waste land available in the lease area	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Nil	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Monitoring of various parameters proposed in the core zone. For discharge of water, monitoring is proposed for water so discharged. In the SOM, three settling tanks are proposed and discharged water shall be analysed 2016-17 onwards.	As per the proposals for core zone. For buffer zone, analysis is required to be done.	

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Progressive closure is important for any mine and in this case, as the mine has started working in 2012-13 and afterwards worked intermittently, progressive closure could not be done as proposed. But monitoring has been done for core zone as per the proposals. In 2016-17 to 2020-21, suitable proposals covering backlogs have been made to attempt progressive closure of the mine.
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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade-wise sorting within lease area	As per the proposals	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual	Manual	
7c	Different grade of mineral sorted out at mines.	CaO> 44%, MgO<2% as cleaned ore (mainly occuring in the lease area) 44%>CaO>34% and MgO<4% as per thrshold value notification shall be stacked separately as sub-grade	As per the proposals	Till date no sub-grade is generated.

7d	Any beneficiation process at mines .	Manual sorting and blending as per the user requirements	As per the proposals
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Working has been done in the high grade containing area. Thus generation of sub-grade is nil till date. In future, generated sub-grade (5% of the ROM) shall be stacked separately and blended with high grade ore as per the user specifications. Mineral rejects (5% of the ROM) shall be used in construction of roads.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Yes	Nil as no top soil encountered.	
8b	Concurrent use or storage of topsoil	Separate stacking and spreading on dumps for stabilization	Nil as no top soil encountered.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Yes	Only one dump for overburden is available. Separate dumps for waste, sub-grade proposed. Mineral rejects shall be utilized in preparation of roads.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No	Nil	

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Plantation is proposed on dumps for stabilization. Pit shall be converted to water reservoir at the end of mine life.	Nil plantation has been done till date as the dump is lying within pit limits. After shifting dump to the 7.5 m non-mining zone which is proposed in 2016-17 to 2020-21 period, plantation shall be done on the dumps.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Existing plantation is in form of small shrubs and bushes. Additional plantation shall be done in the 7.5 m non-mining zone on the dumps	Existing plantation is in form of small shrubs and bushes. Additional plantation shall be done in the 7.5 m non-mining zone on the dumps after shifting of dumps and spreading of top soil over it for stabilization of dumps. Back log for previous proposal period has been covered in 2016-17 to 2020-21 period as per approved SOM.
8g	Survival rate	80%	Not Applicable till date as no plantation carried out. In 2016-17 to 2020-21, survival rate of 80% shall be ensured.
8h	Water sprinkling on roads to control airborne dust	Yes	As per proposals

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Lease surroundings are: S & E side: Forest Land N & W side: Agricultural Land	The area is having bushes and small shrubs mainly. Part of the lease area (approx 5 ha) is not under the surface rights held. N & W side of the area is under cultivation and small bunds have been constructed in that part to avoid any water flow in the agricultural fields. Garland drain has been constructed around the lease boundary adjoining forest land. Overall, as the degraded land is quite less, aesthetic beauty is good in the area.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Annual Return submitted upto 2015-16 Monthly Return being submitted online regularly. As on date submitted upto March'2017.	Compliance of Rule 45.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	No details for Geologist or Mining Engineer Appointed has been mentioned in AR for 2015-16. Mine manager is Shri Dhananjay Baburao Sastrakar	No Geologist or Mining Engineer Appointed Mine manager is Shri Dhananjay Baburao Sastrakar	Violation of Rule 55(3) of MCDR'2017

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Already Exploited and abandoned by O/C mining-2 Ha Reclaimed and rehabilitated- 0.5 Ha Used for waste disposal- 1 Ha Total-3.5 Ha	Incorrect information provided here. Actual Land use is: Area under pit: 0.686 ha OB Dumps: 0.2076 ha Total: 0.8936 ha	Violation of Rule 45 for incorrect information in land use.
9d	Scrutiny of Annual return on afforestation	Nil	Actual afforestation is Nil.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Correct information mentioned.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: Opening Stock 11675 T/ Production 500 T/ Closing Stock 9132.140 T Graded Ore: Opening Stock 11675 T/ Production 500 T/ Dispatches from Mine Head 3042.860 T/ Closing Stock 9132.140 T	Opening Stock, Production and Closing Stock mentioned for ROM and Graded Ore is same. It is observed that no ROM stock of 9132.140 T is available at the site. Further, dispatch of graded ore is being done from the mine. Thus, it is understood that its a typographical mistake and entities that are required to be filled under graded ore section have been filled under ROM. For ROM, the figures should be: Opening Stock 0 T/ Production 500 T/ Closing Stock 0 T	Violation of Rule 45 for correction in ROM stock details that may lead to serious error.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale value: Rs 1369287/ Sale quantity: 3042.860 T Ex-mine Price: Rs 450 per Ton Production Cost: Rs 406.80 per Ton	Information seem correct.	
9h	Scrutiny of Annual return on fixed assets	Provided for Land and building as no other fixed asset is lying for the lease area	Correct information provided.	

9k	Scrutiny of Annual return on mining machineries	Not Applicable as the mine is Category B manual mine	Correct information is provided.
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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
MCDR17	Rule 26(2)	25/04/2017			
MCDR17	Rule 55(1)(3)	25/04/2017			

Date :

(ASHISH MISHRA)

Indian Bureau of Mines