

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

**MCDR inspection REPORT
Jabalpur regional office**

Mine file No : MP/ANUP/BX-4

Mine code : 07MPR38003

- (i) Name of the Inspecting : **P014**) **JAY KUMAR PANDEY**
Officer and ID No.
- (ii) Designation : Assistant Mining Engineer
- (iii) Accompanying mine : Shri Yogesh Kumar Pandey, Mining Engineer
Official with
Designation
- (iv) Date of Inspection : 09-JUL-22
- (v) Prev. inspection date : 19-FEB-20

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **CHACHANDIH (148.181 HA)**
- (b) **Registration NO.** :
- (c) Category : A Other Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
State : MADHYA PRADESH
District : SHAHDOL
Village : CHACHANDIH
Taluka : PUSPARAJGARH
Post office : RAJANDRAGRAM
Pin Code : 484881
FAX No. : 07629-268683
E-mail :
Phone : 07629-268683
- (f) Police Station : Rajandragram
- (g) First opening date : 28-DEC-06
- (h) Weekly day of rest : SUN
2. Address for : M.P.STATE MINING CORPORATION
correspondance Block No. 1, Second Floor, Pariwash Bhawanm
Jail Road, Arera Hillsm Bhopal (M.P.)
3. (a) Lease Number : MPR2171
(b) Lease area : 148.18
(c) Period of lease : 30
(d) Date of Expiry : 04-JUL-35
4. Mineral worked : BAUXITE Main

5. Name and Address of the

Lessee : M.P.STATE MINING CORPORATION
 PARYAVAS BHAVAN ARERA
 HILLS, BLOCK-1 JAIL ROAD
 BHOPAL MADHYA PRADESH
 Phone:0755-763391
 FAX :0755-763394

Owner : M.P.STATE MINING CORPORATION
 PARYAVAS BHAVAN ARERA
 HILLS, BLOCK-1 JAIL ROAD
 BHOPAL MADHYA PRADESH
 Phone: N. A.
 FAX : N. A.

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	26-MAY-05
Plan/Scheme of Mining		Modif.of approved Mining Plan	28-OCT-05
		Modif.of approved Mining Plan	10-MAR-08
		Mining Scheme rule 12 MCDR1988	17-FEB-12
		Mining Scheme rule 12 MCDR1988	25-FEB-16
		MP review under 17(1) MCR 2016	12-MAY-21

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	40 boreholes upto 10m. depth inthe year 2021-22.	63 boreholes done upto 10 to 11m. in the year 2021-22.	
1b	Exploration over lease area for geological axis 1 or 2	Proposed exploration for geological axis 1	Exploration done as proposed.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not proposed.	The exploration was done by lease holder.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Proposed exploration for geological axis 1 for geological axis 2 & 3.	G-1-104.989, G3 - 4.392 HA \G -2 - 22 HA, BARREN AREA - 16.80 HA. However exploration by putting 63 boreholes done ,reserves to be estimated yet.	
1e	Balance reserve as on 01/04/20	Not proposed	Reserves in 122-3717000T Resources in 222-305643T	
1f	General remarks of inspecting officers on geology, exploration etc	Not proposed	Not applicable.	This is a hill top deposit of bauxite.Lateritic soil is 0.25 to 2.0 mtr ,followed by 0-2 mtr lateritic murum and 4-7 mtr bauxite.rock belongs to upper gondwana system of deccan trap.The proposed exploration done by lessee.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	Quarry 1,2,3 in the lease area.	In actual during year 2021-22 the main working done in quarry 2 & 3 as proposed but very less in quarry 1 with respect to proposals.	Hence violation of rule 11(1) (a) pointed out.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes, one in lateritic soil,one in lateritic murum & one in mineral Bauxite.	In actual, one bench of 1.5m in lateritic soil,one bench of 2m. in lateritic murum & one bench of 5-6m. in mineral Bauxite.	
2c	Stripping ratio or ore to OB ratio	1:0.89	About 1:0.85	
2d	Quantity of topsoil generation in m3	12970 M3 lateritic soil	In actual about 12000 CU.M. lateritic soil	
2e	Quantity of overburden generation in m3	35600 M3 o/b (lateritic murum)	In actual about 28125 M3 o/b (lateritic murum).	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Not proposed.	Not applicable.	The mine working carried out in all three quarries by forming three separate benches one each in lateritic soil,murum & mineral bauxite upto maximum 8.5 to 10m. depth ,the simultaneous backfilling carried out in the mine leaving distance for movement of mine vehicles as proposed in RMP. There is deviation in mine working in Quarry -1 in year 2021-22 ,hence violation of rule 11(1) (a) pointed out.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	In 03 diffrent quarries.	In actual in 03 diffrent quarries.	
3b	Quantity of ROM mineral production proposed	124992 T	In actual 124930 T	
3c	Recovery of sailable/usable mineral from ROM production	70%	In actual about 70%	
3d	Quantity of mineral reject generation	Not proposed	Reject not generated hence not applicable.	
3e	Grade of mineral rejects generation and threshold value declared.	Not proposed	NA	
3f	Quantity of sub grade mineral generation.	Not proposed	Sub grade not generated hence not applicable.	
3g	Grade of sub grade mineral generation	Not proposed	NA	
3h	Manual / Mechanised method adopted for segregating from ROM	MANUAL	MANUAL	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not proposed	Not applicable.	
3j	Provision of drilling and blasting in mineral benches	yes drilling & blasting proposed.	Drilling & blasting carried out as proposed.	
3k	Provision of mining machineries in mineral benches	yes excavator & dumpers(tippers) proposed.	Excavators & dumpers deployed as proposed.	

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	2 to 6m.	Maximum height 6m. is suitable for mechnised mining.	
3m	Total area covered under excavation/pits	1.5ha. during the year 2021-22.	In actual about 1.5ha. in 2021-22 & cumulative about 53.5ha. area degraded by pits/quarries so for.	
3n	Ore to OB ratio for the pit/mine during the year.	1:0.89	About 1:0.85	
3o	Total area put in use under different heads at the end of year	PIT=53.5ha. INFRA 0.55 ha.	In actual Pits/quarries=53.5ha. Mine office/workshop-0.55 ha.	
3p	Production of ROM mineral during the last five year period as applicable	17-18 124936 18-19 124936 19-20 124936 20-21-124936 21-22-124992t	17-18 124930t 18-19 124935t 19-20 124935t 20-21-99400t 21-22 124936t	
3q	General remarks of inspecting officers on method of mining etc.	Not proposed	Not applicable	The mines has been producing up to the proposals. Mining is done by shovel/ tripper for waste & mineral. Ore is sorted on face manually. 3/4 benches are made of upto 5mtr ht.deviation in working in Quarry-1 and backfilling in Quarry 1 & 3 observed.violation of rule 11(1) (a) & (b) pointed out.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate waste dumping not proposed only backfilling proposed in excavated quarries.	Only backfilling carried out in excavated area.
4b	Location of topsoil, OB and mineral reject dumps	O/B waste for only backfilling & lateritic top soil for topping over it for future plantation.	In actual backfilling & topping it by lateritic soil and plantation over it done as proposed.
4c	Number of dumps within lease area and outside of lease area	Not proposed.	Only backfilling done.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not proposed.	Only backfilling done.
4e	Number of active and alive dumps.	Not proposed.	No waste dumping only backfilling.
4f	Number of dead dumps.	Not proposed.	NA .
4g	Number of dumps established.	Not proposed.	NA
4h	Whether Retaining wall or garland drain all along dumps are there.	Garland drain proposed near lease boundary.	Garland drain as proposed made in lease area.
4i	Length of Retaining wall or garland drain all along dumps	3000m. length of garland drain.	About 1500m. length of garland drain observed.
4j	Number of settling ponds	02 nos. of settling tank proposed.	In actual 02 nos. of settling tank observed near garland drain in lease boundary.

4k	Specific comments of inspecting officer on waste dump management	Not proposed.	Not applicable.	Only backfilling done as proposed. temporary storage of soil is done for short period (lateritic soil) which is used for topping over backfilling for plantation purpose.
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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.	Yes,backfillin g proposed after full depth of bauxite extracted from lease area.	In actual backfilling done as proposed after full depth of bauxite extracted from lease area .	
5b	Area under backfilling of mined out area	1.35 HA during the year 2021-22.	In actual 1.35ha. area backfilled during the year .	The backfilling was not done during the year 2021-22 in approved proposed area hence violation of rule 11(1) (b) pointed out.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use of generated lateritic soil for rehabilitation /plantation over backfilled area.	Done as proposed.	

5d	Total area fully reclaimed and rehabilitated	Not proposed	In actual about 53.5ha. area degraded by quarries out of that about 42ha. fully mined out and out of that about 30ha. mined out lease area backfilled partly or fully & out of 15ha. fully backfilled area about 12ha. rehabilitated by plantation over it.	
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Not proposed	Not applicable.	During 2021-22 backfilling done over 1.35ha. fully mined out lease area & Plantation of 2000 saplings done on 2 hect. backfilled Area. Two large patches of approx 4 hect each have good growth of trees.

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).	proposed	The PMCP report of 2021-22 submitted.	
6b	Area available for rehabilitation (ha) .	Not proposed	In actual about 53.5ha. area degraded by quarries out of that about 42ha. fully mined out and out of that about 30ha. mined out lease area backfilled partly or fully & out of 15ha. fully backfilled area about 12ha. rehabilitated by plantation over it.	
6c	afforestation done (ha).	2.0ha.	In actual about 2.0ha. during the year 2021-22.	

6d	No. of saplings planted during the year	2000 nos	In actual about 2000 nos of saplings planted over backfilled area.
6e	Cumulative no .of plants	Not proposed	About 20000 survived plantation observed.
6f	Any other method of rehabilitation	Not proposed	Not done.
6g	Cost incurred on watch and care during the year	Not proposed	Approximate about Rs. 500000/-.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Not proposed	Backfilling & plantation over it done.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	1.35ha.	1.35ha.
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	2.0ha.	During the year 2ha. & cumulative out of 15ha. fully backfilled area about 12ha. rehabilitated by plantation over it.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not proposed	Not applicable only backfilling and plantation done.
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	Not proposed	NA

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not proposed	NA	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not proposed	NA	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not proposed	NA	
6p	Compliance of environmental monitoring (core zone and buffer zone)	yes,proposed	The envirnomenta l monitoring done periodically.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Not proposed	Not applicable	In actual about 53.5ha. area degraded by quarries out of that about 42ha. fully mined out and out of that about 30ha. mined out lease area backfilled partly or fully & out of 15ha. fully backfilled area about 12ha. rehabilitated by plantation over it.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Manual sorting of metal & cement grade before dispatch.	Sorting done as proposed.	

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual	Manual	
7c	Different grade of mineral sorted out at mines.	Metal & cement grade bauxite	Sorting done as proposed.	
7d	Any beneficiation process at mines .	Not proposed	Not done.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Not proposed	Not applicable.	Ore is sorted at mine face but in year 21-22 ,all ROM mined out bauxite has cement grade.

Environment :

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Lateritic top soil removal & its utilisation before backfilling proposed.	The lateritic top soil removed & utilised for topping over backfilling before plantation.	
8b	Concurrent use or storage of topsoil	Concurrent use of lateritic soil for spreading over backfilled area.	Done as proposed.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Not proposed	Not done,	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Backfilling purposes.	Backfilling done as proposed.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Backfilling & plantation over it.	Backfilling & plantation done as proposed.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	2000 trees plantation	In actual 2000 trees planted during the year & cumulative about 20000 trees survived so far. Some big old trees exists in the lease area.	
8g	Survival rate	70%	About 60%	
8h	Water sprinkling on roads to control airborne dust	Proposed	Water sprinkling done as per requirement.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Not proposed	Not applicable	The lease area is hill top in between big growth of trees, lessee has backfilled & plantation done over it about 20000 trees. Water sprinkling done.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly & annual returns to be submitted in time.	A.R. Submitted upto 2021-22. M.R. Submitted upto June - 2022	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mr yogesh pandey ME, Mr Anil kumar - geologist	Mr yogesh pandey ME, Mr Anil kumar -geologist present during inpection.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	PIT- 45 HECT- others 0.25	Inactual pits about 53.5ha. & infrastructure 0.55ha.	Violation of rule 45(5) (c) pointed out. Lessee has not submitted upto date plan & sections & drone survey report as required hence violations of rule 33 & 34A pointed out
9d	Scrutiny of Annual return on afforestation	2000 nos.	About 2000 nos. new plantation observed.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Not mentioned	Mineral reject not generated.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM Stock 76102 tonnes graded ore nil.	In actual about 40000tonnes ROM stock observed.	In annual returns the opening & closing stock with reference to ROM production not matching .hence violation of rule 45(5) (c) pointed out.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale value & ex mine price of cement grade -Rs. 591.85/t Cost of Production - 553/T.	The details given seems to be correct.	
9h	Scrutiny of Annual return on fixed assets	Fixed assets Rs. 0/-	Fixed assets like mine office /workshop present within lease area details of fixed assets not furnished.	hence violation of rule 45(5) (c) pointed out.

9k	Scrutiny of Annual return on mining machineries	Dumpers (tipper s) & excavator combination	In actual dumpers (tippers) & excavator deployed.
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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 11(1)	18-JUL-22			
MCDR17	Rule 33	18-JUL-22			
MCDR17	Rule 34(1)	18-JUL-22			
MCDR17	Rule 45(5) (c	18-JUL-22			

Date :

(JAY KUMAR PANDEY)

Indian Bureau of Mines