

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

**MCDR inspection REPORT  
Jabalpur regional office**

**Mine file No :** MP/SATNA/OCHRE-17

**Mine code :** 32MPR35037

- (i) Name of the Inspecting : **G005** ) **SANJAY M. GIRHE**  
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine :  
Official with  
Designation
- (iv) Date of Inspection : 15-JAN-20
- (v) Prev.inspection date : 07-FEB-18

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **PAMARIYA (KH.NO. 80)**
- (b) **Registration NO.** : **IBM/6953/2011**
- (c) Category : B Manual
- (d) Type of Working : Opencast
- (e) Postal address :  
State : MADHYA PRADESH  
District : SATNA  
Village : PAMARIYA  
Taluka :  
Post office :  
Pin Code :  
FAX No. : N. A.  
E-mail : N. A.  
Phone : N. A.
- (f) Police Station : MAJHAGAWAN
- (g) First opening date : 09-DEC-64
- (h) Weekly day of rest : MON
2. Address for : M/ S HIRALAL RAMESHWAR PRASAD  
correspondance : P.O. JAITWARA, DIST. SATNA (M.P.) 485221
3. (a) Lease Number :  
(b) Lease area :  
(c) Period of lease :  
(d) Date of Expiry :
4. Mineral worked : BAUXITE Associated  
OCHRE Main  
CLAY (OTHERS) Associated  
LATERITE Associated

## 5. Name and Address of the

Lessee : HIRALAL RAMESHWAR PRASAD  
P.O. JAITWARA SATNA  
MADHYA PRADESH  
Phone:N. A.  
FAX :N. A.

Owner : HIRALAL RAMESHWAR PRASAD  
P.O. JAITWARA SATNA  
MADHYA PRADESH  
Phone: N. A.  
FAX : N. A.

6. Date of approval of Mining	:	Renewal under rule 24 MCR1960	29-JUL-04
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	08-NOV-12
		Mining Scheme rule 12 MCDR1988	24-OCT-14
		MP review under 17(1) MCR 2016	07-MAR-19

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No exploration was proposed during the year 2018-19	Not Applicable	Area mostly explored by working pits only
1b	Exploration over lease area for geological axis 1 or 2	No exploration was proposed during the year 2018-19	Entire lease area has already been considered geologically explored at G1 level at the time of approval of Review of Mining plan under review.	Bauxite mineralisation very well observed in working pits
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not Proposed	Lessee themselves carried out all the proposed 4 pits .	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No exploration proposed to bring in G1 axis	Nil	About 8.30 Ha explored by way of working pits & about 5.14 Ha yet to be converted in G1 axis
1e	Balance reserve as on 01/04/20	Reserves in Tonnes Probable (121) - 551199MT Resources in tonnes Pre-Feasibility(21): 57636 MT As per approved SOM dtd 24.10.2014	Reserves in Tonnes Probable (121) - 502899 MT Resources in tonnes Pre-Feasibility(21): 57636 MT Updated reserves after depletion of production of 2018-19	Actual Production against 2018-19 was 48300 and considered for depletion.

1f	General remarks of inspecting officers on geology, exploration etc	NA	NA	ML area not explored in detailed manner by conventional exploration. Deposit of the lease area belongs to Upper Rewa Sand Stone group of Vindhyan Supper Group. lease area is hilly having slope towards South.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Working was proposed single pit between N2751550 to 2751760 and E489650 to 489820 at western side and N2751650 to 2751730 and E 489680 to 489700	Working carried out as per the proposed locations	Excavation proposals marked on Development/Peoduction Plan (Plate-7)
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Working was proposed by single bench in laterite/Bauxite & in fire clay	Benches worked out as per the proposals	Area mostly hilly terrain & working were proposed accordingly
2c	Stripping ratio or ore to OB ratio	Proposed as 1:0.15 tonne/CuM	Acheived as 1:0.09 tonne/CuM	Deviation is stripping ratio due to fluctuation in OB generation during the year.
2d	Quantity of topsoil generation in m3	Not Proposed	Nil	Area is mostly devoid of top soil over the bauxite ore mineralisation

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2e	Quantity of overburden generation in m <sup>3</sup>	Proposed as 4411 CuM during the year 2018-19	Acheived 4385 CuM	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	NA	NA	Deposits are of complex in nature as bauxite ore mineralization overlain by laterite capping. Due to this, quality of bauxite gets lower down for formation of intermix bench pattern.

#### Exploitation:

Sl.No.	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	Working proposed in single pit No-1	Working carried out at proposed location.	Working being restricted in single pit no-1 located at central part of ML
3b	Quantity of ROM mineral production proposed	48300 tonne bauxite ore	Achieved as 48300 tonne during the year 2018-19	Cement grade bauxite mined out during the year
3c	Recovery of saleable/usable mineral from ROM production	Proposed as 75%	Achieved as 75%	Recovery of bauxite is almost 75% as envisaged. Laterite is also recovered from the bauxite / laterite zone. Thus mine waste is nominal in Bauxite / laterite zone which appears to be 10-12% of ROM.

3d	Quantity of mineral reject generation	Nil/ Not proposed	NA	There is no mineral reject generation as certain part of mine waste of bauxite also have a market as laterite.
3e	Grade of mineral rejects generation and threshold value declared.	Not Proposed	NA	There is no mineral reject of bauxite mineral.
3f	Quantity of sub grade mineral generation.	Not Proposed	Nil	There is no generation of sub grade mineral of bauxite.
3g	Grade of sub grade mineral generation	Not Proposed	Nil	There is no generation of sub grade mineral of bauxite.
3h	Manual / Mechanised method adopted for segregating from ROM	Mannual as well as Mechanised	By Mannual as well as Mechanised	Working carried out as per the proposals
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not Proposed	Nil	Not required, purpose served by manual means
3j	Provision of drilling and blasting in mineral benches	Not Proposed	Nil	No need of drilling and blasting for extraction of mineral.
3k	Provision of mining machineries in mineral benches	Hydraulic Excavetor and dumper combination	As per proposal extraction of mineral carried out with the use of Excavetor and dumper cobination.	No deviation

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height of 2.5m proposed in bauxite extraction & 1.8mts fireclay	As per proposal there is one bench of 2.0m height in mineral Bauxite/laterite , There is no overburden.benches in weatherd sand stone as well as in ochre were also seen as per proposal.	There is no deviation with respect to bench height in Bauxite/ laterite , weathered sand stone as well as in ochre.
3m	Total area covered under excavation/pits	6.35 Ha cumulative area proposed for excavation as per approved SOM dtd 24.10.14	6.7 Ha cumulative area broken as on 31.03.2019 as per annual return 2018-19	Out of 6.35 Ha total 2.90 Ha area already exploited & abandoned.
3n	Ore to OB ratio for the pit/mine during the year.	Proposed as 1:0.15 tonne/CuM	Achieved as 1:0.09 tonne/CuM	
3o	Total area put in use under different heads at the end of year	As per the previous approved SOM Pits-6.35Ha OB dumps-0.14Ha Road-0.10 Ha Green belt-0.52 Ha	As per the previous approved SOM Already excavated & abandoned-2.90Ha Pits-5.85 Ha OB dumps-0.14Ha Reclaimed & Rehabilitated-1.10 Ha Infrastructure-0.35Ha As per annual return 2018-19	As per previous approved SOM total 7.12 Ha area was considered under financial assurance
3p	Production of ROM mineral during the last five year period as applicable	2015-16 48321 2016-17 48516 2017-18 48321 2018-19 48300	2015-16 24975 2016-17 17180 2017-18 48290 2018-19 48300	Achieved proposed within the proposed production limit of approved SOM
3q	General remarks of inspecting officers on method of mining etc.	NA	NA	Opencast other than fully mechanised method of mining adopted without drilling & blasting with hydraulic excavator and dumper combination.

## Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Not proposed as there is no top soil.	NA	
4b	Location of topsoil, OB and mineral reject dumps	No top soil, mineral reject generation envisaged & OB dumping not proposed	OB generated during the course of mining concurrently being utilized for backfilling purpose.	No top soil, OB dumps existing in the mining lease area
4c	Number of dumps within lease area and outside of lease area	Not Proposed	No OB dumps existing in the lease area	OB generated being used for backfilling purpose
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not Proposed	Not applicable as simultaneous backfilling is in practice.	No deviations
4e	Number of active and alive dumps.	Not Proposed	Nil	Not applicable as simultaneous backfilling is in practice.
4f	Number of dead dumps.	Not Proposed	There is no dead dump	
4g	Number of dumps established.	Not Proposed	NA	No existing OB dumps in the lease area presently
4h	Whether Retaining wall or garland drain all along dumps are there.	Not Proposed	NA	No existing OB dumps in the lease area presently
4i	Length of Retaining wall or garland drain all along dumps	Not Proposed	NA	NA
4j	Number of settling ponds	Not Proposed	NA	There was no settling ponds in the area.



4k	Specific comments of inspecting officer on waste dump management	NA	NA	OB generated during the course of mining concurrently proposed being utilized for backfilling purpose in Quarry-1. Hence, scope of management of dumps does not exist.
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#### Solid Waste Management - Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	About 2.90 Ha is fully mineral exhausted & proposed for backfilling	Total 2.90 Ha excavated & abandoned out of which 1.10 Ha reclaimed & rehabilitated as reported in annual return	Total 5.85 Ha area worked out so far out of which some matured area may be backfilled & rehabilitated in future
5b	Area under backfilling of mined out area	2.90 Ha area matured for backfilled till the end of year 2018-19	About 1.10 hect backfilled & rehabilitated as per annual return	Details as annual return 2018-19
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	There is no top soil in the area. hence not proposed	NA	There is no top soil generation during the year 2018-19
5d	Total area fully reclaimed and rehabilitated	About 2.90 Ha already excavated & abandoned/matured for reclamation & rehabilitation	About 1.10 Ha fully reclaimed & rehabilitated at the end of year 2018-19	Details as per annual return 2018-19
5e	General remarks of inspecting officers on backfilling and reclamation etc.	NA	NA	OB generated year wise being proposed for concurrent backfilling & rehabilitation purpose.

## 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).	To be submitted before 1st July of every year	Not Submitted	Violation of Rule 26(2) of MCDR,2017 was pointed out & issued accordingly.
6b	Area available for rehabilitation (ha) .	About 2.90 Ha	About 1.10 Ha	Rehabilitation work was in progress.
6c	afforestation done (ha).	1.3hect	0.84hect	Rehabilitation work is in progress.
6d	No. of saplings planted during the year	About 810 saplings proposed for plantation during the year 2018-19	About 850 saplings planted during the year in ML area	Plantation done as proposed in approved document
6e	Cumulative no .of plants	NA	NA	Details on cumulative plantation is not available
6f	Any other method of rehabilitation	Not Proposed	Nil	Rehabilitation generally being carried out by plantation only
6g	Cost incurred on watch and care during the year	Not Proposed	Not Given	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	About 2.90 Ha area vailable	About 1.10 Ha reclaimed & rehabilitated	Rate of reclamation & rehabilitation on lower side due less generation OB
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	About 1.53 Ha proposed	About 1.10 Ha reclaimed & rehabilitated	

6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	About 1.53 Ha proposed	About 1.10 Ha reclaimed & rehabilitated	work is in progress.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not Proposed	NA	
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)	Periodical Air, Water, Noise monitoring Proposed	Carried out as per the proposals	Analysis reports were provided

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	NA	NA	Concurrent use of OB proposed for backfilling/reclamation & rehabilitation. Other PMCP works proposed as per approved SOM was being carried out.
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### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	48300 MT proposed as total ROM production for despatch.	38553.15 tonnes of cement grade bauxite & 19625.91 tonne chemical grade dispatchedas & rest 545.21MT as cement grade & 455.47 tonne as chemical grade closing stock at mine head	Mostly cement grade bauxite is being generated from the mine.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Proposed as manual as well as screening	As proposed sorting of grade wise mineral carried out by the lessee.	As per proposal sorting of mineral carried out by the lessee.
7c	Different grade of mineral sorted out at mines.	Not Proposed	During the year 2018-19, mostly cement grade and chemical grade bauxite sorted	Manual and screenig sorting done in lease area
7d	Any beneficiation process at mines	Not Proposed	Only screening practice is adopted by the lessee.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	NA	NA	Mineral conservation aspect is completly covered by the lessee. Manual / screening practice is adopted by the lessee for grade wise sorting.

### Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	Not Proposed	There is no top soil hhh	
8b	Concurrent use or storage of topsoil	Not Proposed	NA	NA
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	About 4411 CuM OB generation was proposed	As per proposal whatever mine waste is generated utilised for leveling of pit as well as leveling of scarp of the hill.	Find ok although level of exploitation of mineral is proportionately about 60% than the proposed one.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	NA	NA	Considering actual production with respect to proposed one it appears that restoration of land by backfilling is satisfactory.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not Proposed	Nil	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Not Proposed	NA	
8g	Survival rate	Not Proposed	75%	
8h	Water sprinkling on roads to control airborne dust	Proposed	Reportedly sprinkling practice in lese area is ther.	Water sprinkling was proposed as approved SOM

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8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	NA	NA	Aesthetic beauty in and around mine area is satisfactory as the naturally grown and some plantation done by the lessee were very seen during the inspection.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. not submitted upto- January- 2020 A.R. submitted upto- 2018-19	Monthly & annual returns were submitted within stipulated time	Montly & annual returns copies were produced during the inspection
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Given	Shri R.C. Bansal appointed as Mining Eng. & Shri Puneet Shukla as Geologist	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Pits-5.85 Ha OB dumps-0.14Ha Reclaimed & Rehabilitated-1.10 Ha Infrastructure-0.35Ha	
9d	Scrutiny of Annual return on afforestation	Given	Total 850 saplings planted in mining lease area	Survial rate of saplings was about 75%
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Not Given	No mineral rejects generated during the year	No mineral rejects generation proposals was given in approved document

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9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	<p>Cement Grade:</p> <p>O/S-798.87MT Despatch-38553.15 MT C/S-545.72 MT</p> <p>Chemical Grade:</p> <p>O/S-10082.38 MT Despatch-19626.91MT C/S- 455.47 MT C/S-1874.33MT</p>	Stocks position as given in annual return
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	<p>Ex-mine price:</p> <p>Cement Grade Bauxite -Rs 751/MT Chemical grade Bauxite- Rs 824/MT</p>	During the year 2018-19 production of cement & chemical grade bauxite occurred
9h	Scrutiny of Annual return on fixed assets	Given	Fixed asset value given as Rs 4738500 in respect Industrial, plants & machineries, etc	Nil
9k	Scrutiny of Annual return on mining machineries	Given	Nil	

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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 :**

**(SANJAY M. GIRHE)**

Indian Bureau of Mines