

MINERALS DEVELOPEMMENT AND REGULATION DIVISION

I/8355/2023

Review and updation of Mining Plan REPORT

Jabalpur regional office

Mine file No : MP/KTN/BX-42

Mine code : 07MPR18024

- (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 : 13-APR-22
- (v) Prev.inspection date : 24-APR-17

PART-I : GENERAL INFORMATION

1. (a) Mine Name : TIKARIYA
- (b) Registration NO. :
- (c) Category : B Manual
- (d) Type of Working : Opencast
- (e) Postal address :
State : MADHYA PRADESH
District : KATNI
Village : TIKARIYA
Taluka : KATNI
Post office : BADKHERA
Pin Code :
FAX No. : N. A.
E-mail : N. A.
Phone : N, A,
- (f) Police Station :
- (g) First opening date : 01-JAN-88
- (h) Weekly day of rest : THU
2. Address for : M/S SAVITRI MINERALS
correspondance : House No 241/1, Saket Nagar
Jabalpur (M.P.) 482002
3. (a) Lease Number : MPR0785
- (b) Lease area : 8.09
- (c) Period of lease : 50
- (d) Date of Expiry : 06-MAY-37
4. Mineral worked : LATERITE Associated
BAUXITE Main

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5. Name and Address of the

Lessee : SAVITRI MINERALS
House No. 241/1, Saket
Nagar Jabalpur (M.P.)
482002 KATNI MADHYA
PRADESH
Phone:N. A.
FAX :N. A.

Owner : SAVITRI MINERALS
PATHAK WARD KATNI MADHYA
PRADESH
Phone: N. A.
FAX : N. A.

6. Date of approval of Mining	:	Existing rule 11 MCDR1988	19-MAY-03
Plan/Scheme of Mining		Renewal under rule 24 MCR1960	12-OCT-07
		Mining Scheme rule 12 MCDR1988	20-JUL-15
		MP review under 17(1) MCR 2016	29-MAY-17

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No exploeartion proposals in 2021-22	Nil	Nil
1b	Exploration over lease area for geological axis 1 or 2	No exploeartion proposals in 2021-22	Nil	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No exploeartion proposals in 2021-22	Nil	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	No exploeartion proposals in 2021-22	G1 level area-4.30Ha Unexplored area-3.79 Ha	Mostly G1 level mining lease area explored by working pits
1e	Balance reserve as on 01/04/20	Reserves in Tonnes Proved(111) - 778414 MT Resources in tonnes Feasibility(211): 199309 MT Resources & Reserves position as per approved ROMP dtd 29.05.2017	Reserves in Tonnes Proved(111) -778514 MT Resources in tonnes Feasibility(211): 199309 MT Resources & Reserves position as per Annual Return 2021-22	No additonal reserves have re-estimated
1f	General remarks of inspecting officers on geology, exploration etc	NA	NA	Lithorformation of the mining lease area belogngs to Mahakasuhah group. The deposit divided into differene lithoilogical zones.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	It proposed to worki in quarry-1 towards north-west from 478mRL to 468mRL	Working carried out in proposed location	For deviation in acheived the proposed OB quantity violation u/r 11(1) of MCDR, 2017 pointed out & issued
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No bench in top soil proposed. Bauxite bench of 5m & OB bench of 5m proposed	Proposed benches configuration maintained	Benches observed in order as proposed
2c	Stripping ratio or ore to OB ratio	Proposed as 1:0.043 Tonne/CuM	Acheived as 1:0.044 Tonne/CuM	During the during the 2021-22 total 2960 CuM overburden generated
2d	Quantity of topsoil generation in m3	No Proposal	Nil	Nil
2e	Quantity of overburden generation in m3	No Proposals	Nil	Nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	NA	NA	In lease area there are three pits and its dimensions are Quarry-1 (225-250m) x 130m x (1.5-11m), Pit-1-24mx 15m x3m and Pit-2 18m x 8.0m x 1.5m

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Single pit	Working carried out in single as proposed	No deviation occurred
3b	Quantity of ROM mineral production proposed	Proposed 90258 MT bauxite ore production during 2021-22	Acheived as 66485.020 in 2021-22	Less bauxite ore production in 2021-22
3c	Recovery of sailable/usable mineral from ROM production	Overall recovery of 70% proposed	Acheived about 70% as proposed	
3d	Quantity of mineral reject generation	No Proposals	Nil	Nil

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3e	Grade of mineral rejects generation and threshold value declared.	No Proposals	Nil	Nil
3f	Quantity of sub grade mineral generation.	No Proposals	Nil	Nil
3g	Grade of sub grade mineral generation	No Proposals	Nil	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Manual	Maual	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposals	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	Proposed by small dia 33m shallow drilling & blasting	Drilling & blasting carried out as proposed	Nil
3k	Provision of mining machineries in mineral benches	L & T PC-200 - 1.2 CuM Dumpers-10Tonne Water Tanker - 5Kl Atlas Comp- 210 CFM Jack Hammer- 33m	L & T PC-200 - 1.2 CuM Dumpers-10Tonne Water Tanker -5Kl Atlas Comp- 210 CFM Jack Hammer-33m	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	OB benches of 5m & Bauxire ore benches-5m proposed	Benches heights maintained as proposed in OB and bauxite ore mining	
3m	Total area covered under excavation/pits	Proposed as 4.30 Ha as per approved ROMP dtd 29.05.2017	Actual 3.40 As per Annual return 2021-22	Less lateral development for which violation u/r 11(1) of MCDR,2017 pointed out & issued
3n	Ore to OB ratio for the pit/mine during the year.	Proposed as 1:0.043 Tonne/CuM	Acheived as 1:0.044 Tonne/CuM	During the during the 2021-22 total 2960 CuM overburden generated

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3o	Total area put in use under different heads at the end of year	Pit area-4.30 Waste dumps-0.35Ha Mineral Storage-0.30Ha Infrastructure -0.10Ha Road-0.10Ha As per approved ROMP	Pit area-3.40 Ha Waste dumps-0.35Ha Mineral Storage-0.30Ha Infrastructure-0.10Ha Road-0.10Ha As per annual return 2021-22	
3p	Production of ROM mineral during the last five year period as applicable	2017-18-: 89053 MT 2018-19-: 89082MT 2019-20-: 79840 MT 2020-21-: 91287 MT 2021-22-: 90258 MT	2017-18-: 5241 MT 2018-19-: 2229 MT 2019-20-: 171.45 MT 2020-21-: 253.89 MT 2021-22-: 66485 MT	For less production of bauxite carried out during the year 2021-22, violation of rule 11(1) of MCDR,2017 pointed out & issued
3q	General remarks of inspecting officers on method of mining etc.	NA	NA	Mechanised open cast working proposed by using Excavator /JCB & dumper combination with shallow drilling & blasting using jack hammer.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Proposed for OB and Bauxite	Working carried out in separate benches as proposed	OB bench of 5m and bauxite of 5m proposed
4b	Location of topsoil, OB and mineral reject dumps	Concurreent use for backfilling proposed of generated OB material	Working carried out as proposed	Nil
4c	Number of dumps within lease area and outside of lease area	Total ten overburden dumps in ML area	Total ten overburden dumps in ML area	OB dumps located at different places in mining lease area
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	All OB dumps outside UPL	All OB dumps outside UPL	

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4e	Number of active and alive dumps.	Total ten overburden dumps in ML area	Total ten overburden dumps in ML area	
4f	Number of dead dumps.	No dead dumps in ML area	No dead dumps in ML area	
4g	Number of dumps established.	No Proposals	Nil	No dead dumps in ML area
4h	Whether Retaining wall or garland drain all along dumps are there.	No Proposals	Nil	Nil
4i	Length of Retaining wall or garland drain all along dumps	No Proposals	Nil	Nil
4j	Number of settling ponds	No Proposals	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management	NA	NA	Total 10 overburden dumps encountered in ML area and future backfilling proposed in working pits where ore has been exhausted.

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.	Presently none of the pit matured for backfilling	Presently none of the pit matured for backfilling	
5b	Area under backfilling of mined out area	No Proposals	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No Proposals	Nil	Nil
5d	Total area fully reclaimed and rehabilitated	Presently no area has been reclaimed & rehabilitated	Presently no area has been reclaimed & rehabilitated	

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5e	General remarks of inspecting officers on backfilling and reclamation etc.	NA	NA	Presently working pits area has not been matured for backfilling.
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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 within time limit as per the provisions of Rule 26 of MCDR,2018	Violation of Rule 26(2) of MCDR,2017 pointed out & issued to the lessee
6b	Area available for rehabilitation (ha) .	NA	NA	
6c	afforestation done (ha).	Within lease area 150 nos & outside lease area 200 no of platation carried out	Within lease area 150 nos & outside lease area 200 no of platation carried out	Nil
6d	No. of saplings planted during the year	Within lease area 150 nos & outside lease area 200 no of platation carried out	Within lease area 150 nos & outside lease area 200 no of platation carried out	Plantation carried out during the year 2021-22
6e	Cumulative no .of plants	NA	NA	No detailed information provided in approved ROMP
6f	Any other method of rehabilitation	No Proposals	Nil	Nil
6g	Cost incurred on watch and care during the year	NA	NA	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Proposed over 20000 SqM	Nil	Very less OB generated during the year 2021-22

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6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Proposed over 12500 SqM	Nil	Very less OB generated during the year 2021-22
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	No Proposals	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposals	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No Proposals	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	No Proposals	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	No Proposals	Nil	Nil
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	No Proposals	Nil	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Periodical Air, Water, Noise monitoring Proposed	Yes, Compliances of environmental monitoring is being carried out.	Analysis reports were provided

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6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	NA	NA	Scope of backfilling/reclamation & rehabilitation doesn't exist presently due to non-maturing of mined out mineral exhausted pits. Periodic monitoring is being carried out by outsourced consultant.
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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	90258 MT proposed as total ROM/Bauxite ore production for despatch. Grade wise sorting proposed within lease area for high grade refractory & rest non-plant cement grade	66485.020 MT production of bauxite carried out and grade wise sorting carried out in ML area	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual	Manual	
7c	Different grade of mineral sorted out at mines.	For Aliminium plants Bauxite having +43.50 Al2O3 & (-)3.20% SiO2, Refractory grade- Al2O3- +50% , SiO2-(-)6% & Fe2O3-(-) 6%, Cement Plant grade- Al2O3- (30-40%), SiO2-18%	For Aliminium plants Bauxite having +43.50 Al2O3 & (-)3.20% SiO2, Refractory grade- Al2O3- +50% , SiO2-(-)6% & Fe2O3-(-) 6%, Cement Plant grade- Al2O3- (30-40%), SiO2-18%	Grade wise sorting carried out in ML area
7d	Any beneficiation process at mines	No proposals	Nil	Nil

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7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	NA	NA	Mineral is being conserved by grade wise sorting in the lease area for Aliminium plants Bauxite having +43.50 Al ₂ O ₃ & (-)3.20% SiO ₂ , Refractory grade- Al ₂ O ₃ - +50% , SiO ₂ -(-)6% & Fe ₂ O ₃ -(-) 6%, Cement Plant grade- Al ₂ O ₃ - (30-40%), SiO ₂ -18%. . Grade wise stacking is done on earmarked locations.
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No Proposals	Nil	Nil
8b	Concurrent use or storage of topsoil	No Proposals	Nil	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	OB generation & its utilization proposed for backfilling	Nil	Very less OB generated during the year 2021-22
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	OB generation & its utilization proposed for backfilling	Nil	Very less OB generated during the year 2021-22
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Proposed over 20000 SqM	Nil	Very less OB generated during the year 2021-22

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8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	During the year 2021-22, 150 nos of plantation ML area & 200 outside ML area carried out	During the year 2021-22, 150 nos of plantation ML area & 200 outside ML area carried out	
8g	Survival rate	Proposed as 80%	Acheived as 75%	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling is proposed by water tanker	Regular water sprinkling is done by water tanker	Water tanker of 5KL capacity is provided for the purpose
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	NA	NA	Aesthetic beauty in and around mine area is not much satisfactory as plantation not done up to that extent. Hence, it was instructed to propose at least 300-400 sapling/year in next ROMP.

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- April-2022 A.R. submitted upto- 2021-22	Annual Return for the year 2021-22 submitted within time limit	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Given	Mining eng and Geologist were appointed as per Rule 55 of MCDR,2017 provisions	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Pit area-3.40 Ha Waste dumps-0.35Ha Mineral Storage-0.30Ha Infrastructure-0.10Ha Road-0.10Ha As per annual return 2021-22	
9d	Scrutiny of Annual return on afforestation	Given	150 nos in ML area and 200 nos outside ML area plantaion carried out	

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9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Not Given	Nil	No mineral rejects generation proposed in 2021-22
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	Cement Grade: O/S-4764.981 MT Despatch-38000.310 MT C/S-33249.691 MT	Only cement grade bauxite ore production acheived during the year 2021-22
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	Ex-mine price: Cement Grade Bauxite -Rs 800/MT	
9h	Scrutiny of Annual return on fixed assets	Given	Nil	Nil
9k	Scrutiny of Annual return on mining machineries	Given	L & T PC-200 - 1.2 CuM Dumpers-10Tonne Water Tanker -5Kl Atlas Comp- 210 CFM Jack Hammer-33m	

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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)	13-JUN-22		MCDR17 Rule 11(1)	13-JUN-22	18-JAN-23
MCDR17 Rule 26(2)	13-JUN-22		MCDR17 Rule 26(2)	13-JUN-22	18-JAN-23
MCDR17 Rule 54(a)	13-JUN-22		MCDR17 Rule 54(a)	13-JUN-22	18-JAN-23

Date :

(SANJAY M. GIRHE)

Indian Bureau of Mines