

MINERALS DEVELOPEMMENT AND REGULATION DIVISION

I/9956/2023

Review and updation of Mining Plan REPORT

Jabalpur regional office

Mine file No : MP/JBP/I.ORE-6

Mine code : 30MPR18002

- (i) Name of the Inspecting : C004) ROBERT SIMON C
Officer and ID No.
- (ii) Designation : Assistant Controller Mine
- (iii) Accompanying mine : Shri. V.K.Pandey (Mine Manager) & Shri. Sushil Kumar
Official with
Designation
- (iv) Date of Inspection : 19-JUL-22
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (a) Mine Name : AGARIYA
- (b) Registration NO. :
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
State : MADHYA PRADESH
District : JABALPUR
Village : AGARIYA
Taluka : SIHORA(MEGHAGWA)
Post office : AGARIYA
Pin Code : 483334
FAX No. : N. A.
E-mail : N. A.
Phone : 07622-220142 (Katni)
- (f) Police Station :
- (g) First opening date : 19-SEP-87
- (h) Weekly day of rest : FRI
2. Address for : M/S NIRMALA MINERALS
correspondance : PATHAK WARD, KATNI (M.P.) 483501
3. (a) Lease Number : MPR0558
- (b) Lease area : 20.14
- (c) Period of lease : 50
- (d) Date of Expiry : 05-MAR-37
4. Mineral worked : IRON ORE Main

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5. Name and Address of the

Lessee : NIRMALA MINERALS
 PATHAK WARD KATNI MADHYA
 PRADESH
 Phone:N. A.
 FAX :N. A.

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

Mining Engineer

Name : SHIV PRATAP SINGH,Full Time
 Qualification : B.E.(Mining)
 Appointment/ : 27-SEP-10
 Termination date

6. Date of approval of Mining	:	Existing rule 11 MCDR1988	27-JAN-00
Plan/Scheme of Mining	:	Existing rule 11 MCDR1988	27-JAN-00
	:	Mining Scheme rule 12 MCDR1988	27-APR-06
	:	Renewal under rule 24 MCR1960	25-JUL-07
	:	Mining Scheme rule 12 MCDR1988	13-FEB-13
	:	MP modif under 17(3) MCR 2016	24-MAR-17
	:	MP modif under 17(3) MCR 2016	29-OCT-20

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	
1b	Exploration over lease area for geological axis 1 or 2	Nil	Nil	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NA	NA	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Not specified	G1 (Ha) 12.0 Area to be Nil 8.141 ha	
1e	Balance reserve as on 01/04/20	Not specified	111-8139250 T as on 01-04-2022	
1f	General remarks of inspecting officers on geology, exploration etc			The Iron ore deposit in the lease is of Banded Iron formation (BIF) of Pre Cambrian age. The BIF deposit is very well developed and is siliceous. The common name used is Banded Haematite Quartzite(BHQ). The banded formation is probably formed as chemical precipitates in partially enclosed sedimentary basins of back water type. The ore body form low hillock. The ore is generally haematite and is often slightly specular in character and also jaspery.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	During the year 2021-22, It was proposed to extend the Quarry-1 by forming benches 404m, 398 m, 392 m, 386 m and 380 mRL and Quarry 2.	During inspection it is noticed that the said excavation proposal of quarry-1 is lagging both vertically and laterally whereas the advancement/excavation of quarry-2 both laterally & vertically is more than that of the approved proposals leading to improper benching & highwall in some parts of quarry-2.	Violation pointed out under rule 11(1) of MCDR 2017
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in overburden and mineral proposed	Separate benches in overburden and mineral maintained.	
2c	Stripping ratio or ore to OB ratio	1:0.05	1:0.03	
2d	Quantity of topsoil generation in m3	Nil	Nil	
2e	Quantity of overburden generation in m3	27439	16148	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		During the year 2021-22, It was proposed to extend the Quarry-1 by forming benches 404m, 398 m, 392 m, 386 m and 380 mRL (Ref Plate No-7) of approved document. But, during inspection it is noticed that the said excavation proposal of quarry-1 is lagging both vertically and laterally whereas the advancement/excavation of quarry-2 both laterally & vertically is more than that of the approved proposals leading to improper benching & highwall in some parts of quarry-2.	The mining operations in the mine were not being not carried out in accordance with the approved proposals for the 2021-22. Violation pointed out under rule 11(1) of MCDR 2017.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	02	02	
3b	Quantity of ROM mineral production proposed	500007	421466.56	
3c	Recovery of sailable/usable mineral from ROM production	90%	90%	
3d	Quantity of mineral reject generation	Nil	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	NA	NA	
3f	Quantity of sub grade mineral generation.	NA	NA	
3g	Grade of sub grade mineral generation	NA	NA	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not proposed	Nil	Lessee is not having any approved proposals for beneficiation study.
3j	Provision of drilling and blasting in mineral benches	No drilling & blasting proposed	Not Applicable	Mostly the iron ore is of friable/fines in nature
3k	Provision of mining machineries in mineral benches	Back Hoe Ex-210-02 Nos 1.2CuM, PC-300, Dumpers 27 T capacity-13 Nos Water Tanker-5KL Mobile Screening Unit	Back Hoe Ex-210-02 Nos 1.2CuM, PC-300, Dumpers 27 T capacity-13 Nos Water Tanker-5KL Mobile Screening Unit	HEMM deployment proposed as per the capacity & targeted production.

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3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	No OB bench height is proposed, bench height of 6m proposed in iron ore proposed	Mostly the benches heights in ore are being maintained
3m	Total area covered under excavation/pits	Not specified	7.60 ha
3n	Ore to OB ratio for the pit/mine during the year.	1:0.05	1:0.03
3o	Total area put in use under different heads at the end of year	Not specified	11.41 ha
3p	Production of ROM mineral during the last five year period as applicable	2017-18 53730 2018-19 49923 2019-20 50614.2 2020-21 279894 2021-22 500007 421466.56	2017-18 26453.89 2018-19 44966.94 2019-20 41160.33 2020-21 7027.69 2021-22 421466.56
3q	General remarks of inspecting officers on method of mining etc.		Open cast fully mechanised working proposed by using Excavator & dumper combination without drilling & blasting. Two working pit are located eastern & western side.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No top soil generation was proposed. Concurrent use for backfilling proposed	OB/Inter-burden generated utilized as per the proposals.	

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4b	Location of topsoil, OB and mineral reject dumps	Inter-burden proposed to be backfilled in 7.5m barrier & rest for preparing protective bund towards eastern boundary	Inter-burden/mine waste used as per the proposals	
4c	Number of dumps within lease area and outside of lease area	Only one dump within lease area located toward eastern side	Only one dump within lease area located toward eastern side	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	OB/waste generated proposed for backfilling of 7.5m barrier zone	Existing OB dump outside the UPL	
4e	Number of active and alive dumps.	At Present one OB dump in the lease area towards eastern part of ML	At Present one OB in the lease area towards eastern part of ML	
4f	Number of dead dumps.	No dead dumps in the lease area	No dead dumps in the lease area	
4g	Number of dumps established.	Not Proposed	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	Not Proposed	Nil	
4i	Length of Retaining wall or garland drain all along dumps	Not Proposed	Nil	
4j	Number of settling ponds	Not Proposed	Nil	
4k	Specific comments of inspecting officer on waste dump management			The mine waste is in the form of lateritic soil in southern part of ML area. These mine waste proposed for backfilling purpose on 7.5m barrier zone.

Solid Waste Management - Backfilling:

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Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Not Proposed	None of the quarry area is fully ore exhausted. Hence, scope doesn't exist.	Backfilling proposed on 7.5m barrier zone.
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)	Not Proposed	Nil	No top soil generation was proposed during the year.
5d	Total area fully reclaimed and rehabilitated	Nil	Details on backfilling not available for the year	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Lateritic waste as mine waste encountered in the lease area. No top soil generation is proposed. Generated mine waste proposed for reclamation by backfilling means.

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 was pointed out under rule 26(2) of MCDR,17 & issued.
6b	Area available for rehabilitation (ha) .	Not Proposed	Not done	Mining operations are continued & no benches matured so far rehabilitation purpose so far.
6c	afforestation done (ha).	Not Proposed	Nil	
6d	No. of saplings planted during the year	Not Proposed	Nil	
6e	Cumulative no .of plants	Not Proposed	Nil	

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6f	Any other method of rehabilitation	Not Proposed	Nil
6g	Cost incurred on watch and care during the year	Not Proposed	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	NA	NA
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NA	NA
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	NA	NA
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NA	NA
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NA	NA
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	NA	NA
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NA	NA

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6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	NA	NA	Rehabilitation not proposed over waste land
6p	Compliance of environmental monitoring (core zone and buffer zone)	Periodical Air, Water, Noise monitoring Proposed	Carried out as per the proposals	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Scope of PMCP work is not very well existed in the lease area as none of the working pit fully ore exhausted.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	500007 tonnes proposed as total ROM production for despatch. No grade wise sorting proposed	421466.560 tonne ore produced & 100079.330 lumps & 321387.230 tonne fines ore dispatched as <55% Fe content	Production of only <55% Fe content carried out during the year
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Screening & sizing of Iron ore proposed	Screening & sizing of Iron ore carried out	
7c	Different grade of mineral sorted out at mines.	Sponge grade iron ore, Cement grade & Beneficiable grade proposed	Sponge grade - Fe 58 to 60%, Cement grade - 48 to 50% & Beneficiable grade -45 to 52%	
7d	Any beneficiation process at mines .	No beneficiation proposed within ML area	NA	Iron ore of ML supplied to beneficiation plant located at Hargarh, Sihora for upgradation

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7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Ore is being conserved by suitable screening & sizing. Iron ore being supplied/sold to the beneficiation plant located Sihora for upgradation.
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No top soil generation & utilization proposed	Nil	Top soil not encountered during the year
8b	Concurrent use or storage of topsoil	Not Proposed	Nil	No generation of top soil proposed during the year.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	OB generated proposed for backfilling at 7.5m barrier zone & for protective bund formation.	Nil	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Use of overburden proposed for backfilling purpose at 7.5m barrier zone only	Nil	
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)	Plantation not proposed during the year	Not done	

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8g	Survival rate	Not Proposed	Not done	
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			Aesthetic beauty in and around mine area is good.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. & A.R. submitted.	M.R. & A.R. submitted.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Not Given	Manager Prafulla Kumar Sinha Mining Engineer in charge Prafulla Kumar Sinha Geologist in charge Balveer Singh Patel	

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9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Lease area (surface area) utilisation as at the end of year (hectares) Under forest Outside forest Total (i) Already exploited & abandoned by opencast (O/C) mining 0.000 0.000 0.000 (ii) Covered under current (O/C) Workings 0.000 7.600 7.600 (iii) Reclaimed/Rehabilitated 0.000 0.000 0.000 (iv) Used for waste disposal 0.000 1.000 1.000 (v) Occupied by plant, buildings, residential, welfare buildings & roads 0.000 0.400 0.400 (vi) Other Purpose (DRAIN & MINERALS STORAGE) 0.000 2.410 2.410
9d	Scrutiny of Annual return on afforestation	Not Given	(i) Number of trees planted during the year 575 (ii) Survival rate in percentage 80.00
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Not Given	No mineral/ore rejects generated during the year
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	Below 55% Fe content (Lumps): O/S-46304.850 tonnes Production-100079.330 tonnes Despatch-126352.450 tonnes C/S-20031.730 tonnes Below 55% Fe content (Fines): O/S-321387.230 tonnes Production-294939.750 tonnes Despatch-167029.770 tonnes C/S-162915.71 tonnes

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9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	Ex-mine price: Below 55% Fe (Lumps) -Rs 607.17 /MT Below 55% Fe (Fines) -Rs 551.11/MT
9h	Scrutiny of Annual return on fixed assets	Given	No comments
9k	Scrutiny of Annual return on mining machineries	Given	Type of machinery Capacity of each unit No.of units Electrical/ Non-Electrical (specify) Used in opencast/ underground (specify) BACK HOE 1.400 CUM 2 Non Electrical Opencast DUMPER 20.000 TONNE 4 Non Electrical Opencast FRONT END LOADER 2.800 CUM 1 Non Electrical Opencast DOZER 410.000 HP 1 Non Electrical Opencast

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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)	30-AUG-22		MCDR17 Rule 11(1)	30-AUG-22	09-FEB-23
MCDR17 Rule 26(2)	30-AUG-22		MCDR17 Rule 26(2)	30-AUG-22	09-FEB-23
MCDR17 Rule 31(4)	30-AUG-22		MCDR17 Rule 31(4)	30-AUG-22	09-FEB-23

Date :

(ROBERT SIMON C)

Indian Bureau of Mines