

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

**MCDR inspection REPORT
Nagpur regional office**

Mine file No : MP/CNW/MN-35/NGP

Mine code : 40MPR08010

- (i) Name of the Inspecting : **G005**) **SANJAY M. GIRHE**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : G
Official with
Designation
- (iv) Date of Inspection : 10-AUG-21
- (v) Prev.inspection date :

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KACHIDANA (5.859 HA)**
- (b) **Registration NO.** :
- (c) Category : B Manual
- (d) Type of Working : Opencast
- (e) Postal address
State : MADHYA PRADESH
District : CHHINDWARA
Village : RAMPETH DAMAMI
Taluka : SAUSAR
Post office : SAUSAR
Pin Code : 480106
FAX No. :
E-mail :
Phone :
- (f) Police Station :
- (g) First opening date : 06-FEB-12
- (h) Weekly day of rest :
2. Address for :
correspondance
3. (a) Lease Number : MPR2282
(b) Lease area : 5.86
(c) Period of lease : 30
(d) Date of Expiry : 07-OCT-39
4. Mineral worked : MANGANESE ORE Main

5. Name and Address of the

Lessee : M/S RAWELL MINING CORPORATION
RAWELL BUILDING, PLOT NO.
18, RAMDASPETH NAGPUR
CHHINDWARA MADHYA PRADESH
Phone:0712-2422384
FAX :

6. Date of approval of Mining : Fresh under rule 22 MCR1960 25-MAR-09
Plan/Scheme of Mining

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 2020-21	Nil	Previously 04 nos of core boreholes were drilled and Mn mineralisation were proved upto 359mRL
1b	Exploration over lease area for geological axis 1 or 2	No exploration was proposed during the year 2020-21	During the year 2021-22 total 09 core boreholes were proposed for establishing area under G1 level	Till the date of inspection proposed exploration was not undertaken
1c	Exploration Agencies and Expenditure in lakh rupees during the year	During the year 2021-22 total 09 core boreholes were proposed	Proposed exploration was not commenced till the date of inspection	During inspection it was ensured that proposed exploration during the year 2021-22 shall be commenced at the earliest.
1d	Balance area to be explored to bring Geological axis in 1 or 2	During the year 2021-22 total 09 core boreholes were proposed	Area under G2 level of exploration -1.87, Balance area to be explored-3.72	During the year 2021-22 total 09 core boreholes were proposed to bring the area in G1 level
1e	Balance reserve as on 01/04/20	Reserves in Tonnes Proved(111) - 13642 MT Resources in tonnes Feasibility(211): 24791MT Resources & Reserves position as per Review of Mining Plan dtd 22/09/2020	Reserves in Tonnes Proved(111) -12061 MT Resources in tonnes Feasibility(211): 24791MT Resources & Reserves position as per Annual Return for the year 2020-21	Reserves position after after depletion of production carried out in approved plan period

1f	General remarks of inspecting officers on geology, exploration etc	NA	NA	In past exploration was carried out by 04 nos core drilling. The Mn ore formation of mining lease area belongs to Sitasongi and Mansar formation of Sausar Group of Mesoproterozoic age. The strike direction of formation is E-W direction & dipping 75-80 deg towards South.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	It was proposed to work in between N271309 to N271469 & E2403612 to E2403750 with bench floor mRLs as 401 to 383mRLs as earmarked in 3C Plate for the year 2020-21	Working carried out as per the proposal	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Bench from 401-395MRL in top soil, OB benches from 395 to 383mRL & Mineral benches from 389-383mRL proposed	Working carried out as per the proposals	
2c	Stripping ratio or ore to OB ratio	1:43.63 Tonne/CuM	1:29.92 Tonne/CuM	During the year 2020-21 total 25200 CuM overburden generated
2d	Quantity of topsoil generation in m3	24864 CuM	12115 CuM	Less top-soil generated during the year 2020-21

2e	Quantity of overburden generation in m3	47210 CuM proposed during 2020-21	35200 CuM acheived in 2020-21	Less OB generated during the year 2020-21
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	NA	NA	There is single working pit and its dimensions were reported in ROMP for period 2019-20 to 2022-23 approved on 22.09.2020 as Pit No-1 (1.877 Ha x 20-25m). Mn ore exploited from running mine by means of this working pit.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Excavation were proposed in Pit-1 from 401mRL to 383mRL as marked in Plate-VIA	Working carried in Pit-1 as proposed	Mn ore mineralisation very well seen in working pit
3b	Quantity of ROM mineral production proposed	1653 MT proposed in 2020-21	1581 MT acheived in 2020-21	Production acheivment slightly on lower side.
3c	Recovery of sailable/usable mineral from ROM production	Proposed as 90% from ROM	Acheived about 90% recovery of Mn ore from ROM	Remaining 10% as lateritic soil and mica schist
3d	Quantity of mineral reject generation	No Proposals	Nil	No mineral rejects generation proposed
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	Mechanised opencast method	Working carried by mechanised opencast method	Drilling and blasting was proposed to win the ore
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposals	Nil	Not proposed
3j	Provision of drilling and blasting in mineral benches	Drilling & blasting is proposed by Jack hammer and wagon drill	Drilling & blasting carried out as per the proposals	
3k	Provision of mining machineries in mineral benches	Hydraulic Shovel, 1.0Cum capacity TATA Dumper model 2515, 24 T capacity Tractor mounted Air Compressor Jack Hammer with Drill rods Wagon Drill- 85mm Dia Mahindra Tractor with Water Tank on trolley Water pump with Diesel engine	Hydraulic Shovel, 1.0Cum capacity TATA Dumper model 2515, 24 T capacity Tractor mounted Air Compressor Jack Hammer with Drill rods Wagon Drill-85mm Dia Mahindra Tractor with Water Tank on trolley Water pump with Diesel engine	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	OB bench height of 5m is proposed Bench height of 5m proposed in ore	Working carried out as per the proposals and bench height noticed in correct manner	Proposed bench height is suitable as per the deposit
3m	Total area covered under excavation/pits	2.73 Ha area was proposed in approved ROMP period i.e. 2020-21 to 2024-25	1.877 Ha as on 01.04.2021 as per the annula return for the year 2020-21	
3n	Ore to OB ratio for the pit/mine during the year.	1:43.63 Tonne/CuM	1:29.92 Tonne/CuM	Less overburden generated during the year 2020-21

3o	Total area put in use under different heads at the end of year	As per the previous approved ROMP Pits-2.37Ha Storage of top soil-0.23Ha Waste Dumps-0.80Ha Mineral Storage-0.10Ha Infrastructure -0.01Ha Road-0.04Ha	As per the previous Annual Return 2020-21 Pits-1.87Ha Waste Dumps-0.29Ha Infrastructure-0.51Ha Road-0.04Ha	Details as per the annual return for the year 2020-21
3p	Production of ROM mineral during the last five year period as applicable	2016-17-: 285.30 MT 2017-18-: 3392.10 MT 2018-19-: 6672.60 MT 2019-20-: 4087.80 MT 2020-21-: 1653.0 MT	2016-17-: 700.0 MT 2017-18-: 500.0 MT 2018-19-: 600.0 MT 2019-20-: 600.0 MT 2020-21-: 1581.0 MT	Production on lower side due to low demand of ore as reported.
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 and wagon drill.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No Proposals	Nil	Concurrently used for for backfilling and road maintenance
4b	Location of topsoil, OB and mineral reject dumps	No Proposals	Single OB dumps located towards northern side near BP No-20 to 22	Concurrently used for for backfilling and road maintenance
4c	Number of dumps within lease area and outside of lease area	Single OB dumps located towards northern side near BP No-20 to 22	Single OB dumps located towards northern side near BP No-20 to 22	

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Existing OB dumps located between N271390 to N271479 towards northern side outside the UPL	Existing OB dumps located between N271390 to N271479 towards northern side outside the UPL	Only one OB dump located in mining lease area towards northern side
4e	Number of active and alive dumps.	Active OB dump located between N271390 to N271479 towards northern side outside the UPL	Active OB dump located between N271390 to N271479 towards northern side outside the UPL	Only one active OB dump in mining lease area
4f	Number of dead dumps.	No dead OB dumps in ML area	No dead OB dumps in ML area	Only one active OB dump in mining lease area
4g	Number of dumps established.	No Proposals	Nil	
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	No proposals were given during the year 2020-21
4j	Number of settling ponds	No Proposals	Nil	No settling ponds observed in ML area
4k	Specific comments of inspecting officer on waste dump management	NA	NA	Presently mine working pit not matured for reclamation and rehabilitation, hence the scope of backfilling doesnot exist. Generated OB being stacked at earmarked location.

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 Proposals	Presently working pit is not matured or full extraction of mineral not done, hence scope for backfilling doesnot exists.	
5b	Area under backfilling of mined out area	No Proposals	No details provided in approved document	Working pit not matured for backfilling so far.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No Proposals	Nil	
5d	Total area fully reclaimed and rehabilitated	No Proposals	Details not provided in approved document	
5e	General remarks of inspecting officers on backfilling and reclamation etc.	NA	NA	Presently working pit not matured/ore exhausted, hence scope of backfilling for reclamation purpose doesnot exists. But, mined out area in 7.5m barrier zone was proposed for backfilling.

Progressive Mine Closure Plan:

Sl.No.	Item	Proposals	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 under Rule 26(2) of MCDR,2017 was pointed out & issued to the lessee.
6b	Area available for rehabilitation (ha) .	No Proposals	Nil	None of the working pit area matured for reclamation & rehabilitation purpose.
6c	afforestation done (ha).	29-30 saplings were proposed in 2020-21	200 saplings planted in ML area during the year 2020-21	50 saplings also planted outside ML area

6d	No. of saplings planted during the year	29-30 saplings were proposed in 2020-21	200 saplings planted in ML area during the year 2020-21	50 saplings also planted outside ML area
6e	Cumulative no .of plants	No details available in approved document	No details available in approved document	Nil
6f	Any other method of rehabilitation	No Proposals	Nil	Nil
6g	Cost incurred on watch and care during the year	No Proposals	Nil	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	1280 CuM proposed for backfilling at 7.5m barrier zone	Backfilling carried out as proposed	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	1280 CuM proposed for backfilling at 7.5m barrier zone	Backfilling carried out as proposed	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	14 saplings proposed on backfilled area	Plantation carried out as proposed	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposals	Nil	None of the working is mineral/ore exhausted so far now
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	Periodical Air, Water, Noise monitoring carried out as proposed	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	NA	NA	Presently working area is not mineral/ore exhasuted, hence scope of backfilling/reclamation & rehabilitation doesn't exist and no proposals are given. Periodic monitoring is being carried out by outsourced consultant.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	1653 MT proposed as total ROM production for despatch. Grade wise sorting proposed within lease area was proposed.	976.22 MT of Mn ore (Below 25% Mn) and 24.64MT of 25% to <35% Mn ore dispatched during the year 2020-21	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Proposed as Manual dressing, sizing and sorting of ROM	Manual dressing, sizing and sorting of ROM carried out to desired grades of Mn Ore	Jigging process also adopted

7c	Different grade of mineral sorted out at mines.	Manganese Ore of < 25% Mn and Mnaganese ore of 25% to below 35% Mn	Manganese Ore of < 25% Mn and Mnaganese ore of 25% to below 35% Mn	Dispatches of both the grades of Manganese ore reported in annula return
7d	Any beneficiation process at mines .	No Proposals	Nil	Manual dressing, sizing and sorting of ROM carried out to desired grades of Mn Ore
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	NA	NA	Manganese ore is being conserved by grade wise sorting in the lease area. Manganese Ore of < 25% Mn and Mnaganese ore of 25% to below 35% Mn being sorted at mine site.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Consurent use for spreading over backfilled area and gardening purpose proposed	Concurrently used over backfilled area for plantation purpose	Top soil mostly of lateritic in nature in the ML area
8b	Concurrent use or storage of topsoil	Consurent use for spreading over backfilled area and gardening purpose proposed	Concurrently used over backfilled area for plantation purpose	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Partially proposed for backfilling purposed & partially dumping over existing dump	Overburden utilized as proposed	Backfilling carried out at few places in 7.5m barrier zone

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Partially proposed for backfilling purposed & partially dumping over existing dump	Overburden utilized as proposed	None of working pits are mineral/ore exhausted, hence above scope restoring the land doesnot exists.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No Proposals	Nil	Only backfilling at 7.5m barrier zone was proposed at places
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	During the year 2020-21 total 28-29 saplings proposed for plantation	About 200 saplings planted as against the proposals	
8g	Survival rate	Proposed 85%	Acheived as 85%	
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 was not done up to that extent. Hence, it was instructed to propose at least 200 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. for the month of July-2023 submitted within stipulated A.R. submitted upto- 2020-21	Annual Return for the year2020-21 submitted within time limit. & Annual return for the year 2018-19 was under preparation till the date of inspection dtd 03.05.2019	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Not Given	Mining Engineer & Geologist were not appointed	Violation under Rule 55(1) (c) (i) of MCDR, 2017 pointed out and issued to the lessee
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Pits-1.87Ha Waste Dumps-0.29Ha Infrastructure-0.51Ha Road-0.04Ha	As per annual return for the year 2020-21
9d	Scrutiny of Annual return on afforestation	Given	200 Saplings planted in mining lease area	50 nos. of saplings also plated out side ML area. Survival rate is about 85%
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Not Give	Nil	No mineral rejects generation proposed
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	Below 25% MN: O/S-142.310 MT Production-1581.0 MT Despatch-976.22 MT C/S-747.15 MT 25% to below 35% MN: O/S-24.640 MT Production- Nil Despatch-24.640 MT C/S-Nil	Production of Mn ore >35% Mn not produced during the year
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	Ex-mine price: Below 25% Mn Grade -Rs 3100.00/MT 25% to below 35% Mn Grade- Rs 3910.63/MT	
9h	Scrutiny of Annual return on fixed assets	Given	Nil	
9k	Scrutiny of Annual return on mining machineries	Given	Nil	

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)	27-AUG-21			
MCDR17	Rule 26(2)	27-AUG-21			
MCDR17	Rule 31(1)	27-AUG-21			
MCDR17	Rule 55(1) (3)	27-AUG-21			

Date :

(SANJAY M. GIRHE)

Indian Bureau of Mines