

**INDIAN BUREAU OF MINES**  
**MINERALS DEVELOPMENT AND REGULATION DIVISION**  
**MCDR Inspection REPORT**  
**Jabalpur Regional office**

**Mine code: 40MPR01069**

(i)	Name of Inspecting officer	:	Shri Sudip Ranjan Mazumdar
(ii)	Designation	:	Regional Mining Geologist
(iii)	Accompanying mine official with Designation	:	Shri Rajesh Bhattacharya, Jt. G.M. Shri Nishad Nikose, Mining Engineer Shri Subhransu Pani, Manager (Geology) Shri Rajesh Manke, Surveyor
(iv)	Date of Inspection	:	01/10/2024
(v)	Previous Inspection date	:	19.07.2023

**PART-I: GENERAL INFORMATION**

1	(a)	Mine Name	:	TIRODI MINE
	(b)	Registration Number	:	IBM/5711/40MPR01069
	(c)	Category	:	Category A
	(d)	Type of Working	:	Opencast
	(e)	Postal address	:	
		State	:	Madhya Pradesh
		District	:	Balaghat
		Village	:	Tirodi
		Taluka	:	Tirodi
		Post Office	:	Tirodi
		Pin code	:	481449
		Fax	:	NA
		email	:	moilindia_ngp@sancharnet.in
		Phone No	:	7410084445
	(f)	Police Station	:	Tirodi
	(g)	First Opening date	:	NA
	(h)	Weekly day of rest	:	Sunday
2		Address for Correspondence	:	
3	(a)	Lease Area	:	37.09 Ha
	(b)	Period of lease	:	70 Years
	(c)	Date of Expiry	:	14.09.2043
4		Mineral Worked (Main)	:	
5		Name of address of the Lessee with Phone, email and fax number	:	M/s MOIL LIMITED, (A Government of India Enterprise) MOIL Bhawan, 1A, Katol Road, Nagpur-440013 Email: <a href="mailto:moilindia_ngp@sancharnet.in">moilindia_ngp@sancharnet.in</a> Telephone: 0712-2590775, Fax: 0712-2592073
		Name and address of the Owner/Nominated Owner with Phone, email, fax number and Date of appointment	:	Shri M.M. Abdulla Director (Prod. & Planning), MOIL LIMITED, MOIL Bhawan, 1A, Katol Road, Nagpur-440013 Phone: 0712-2590775 Fax: NA; Email: <a href="mailto:mma@moil.nic.in">mma@moil.nic.in</a> Date of Appointment: 10/01/2022

	Name and address of the Agent with Phone, email, fax number and Date of appointment	:	Shri Rajesh Kumar Singh, Agent & Joint General Manager (Mines) Gr.-I, MOIL LIMITED, Balaghat Mine (M.P.) 481002 Phone: 7410084445 Fax: NA Email: rajesh_rajikhushi@rediffmail.com Date of Appointment: 26/10/2021
	Name of address of the Manager with Phone, email, fax number and Date of appointment	:	Shri Manish Madhav Dhoke, Mine Manager, MOIL LIMITED, Tirodi Mine, District – Balaghat (M.P.) 481449 Phone: 9424664731 Fax: NA Email: mm.td@moil.nic.in Date of Appointment: 30.01.2024
	Mining Engineer Name Qualification Date of Appointment	:	Shri Nishad Nikose, B.Tech. (Mining) Date of Appointment – 01/05/2022
	Geologist Name Qualification, Date of Appointment	:	Smt. Akanksha Sahu Qualification: M.Sc. (Geology) Date of Appointment – 01.07.2023
6	Date of approval of Mining Plan/Review of Mining Plan etc.	:	Review of Mining Plan approved vide letter no MP/Balaghat/Manganese/MPLN/MOD-29/2019-20 Jabalpur dated 29.06.2020 for the proposal period 2020-21 to 2024-25

**PART III-MCDR Report details:**

1. **Scientific Mining:** Compliance of proposals of approved mining plan/scheme of mining. (Duplication of information in existing TMIS data sheets and draft write up has been avoided.)

**Exploration**

S.No	Item	Proposals	Actual Work	Remarks
1a	Backlog of previous year	2020-21: 5 Nos 2021-22: 20 Nos	2021-22: 11 Nos 2022-23: 04 Nos 2023-24: Nil 2024-25- Drilling in Progress	In 2024-25, Form-I for 21 BHs have been submitted till date.
1b	Exploration over lease area for Geological axis 1 or 2.	Not Proposed	Nil	Nil
1c	Exploration Agency & Expenditure in Lakh Rupees during the year	Not Proposed	Nil	Nil
1d	Balance area to be explored to bring the Geological axis in 1 or 2.	The lease area is covered by black dumps and insitu reserves are not proved in this lease area. Hence, the lease area is yet to be explored.	G1: 0.87 Ha, G2:11.09 Ha, G3:12.20 Ha, Unexplored Area: 12.93 Ha	Nil
1e	Balance reserves as on 01.04.2024	As per annual return submitted for 2023-24, proved reserves of dump as on 01.04.2023 was 112029 tones	Production from dump mining during 2023-24 was 3600 tones. The remaining reserves for dump mining as on 01.04.24 is 108429 tones.	Data as per annual return 2023-24
1f	General remarks of Inspecting officer on geology, exploration etc.	There is no backlog in exploration proposal. Drilling is in progress.		

**Development**

S.N.	Item	Proposals	Actual Work	Remarks
2a	Location of Development w.r.t. lease area	Dump mining proposed from existing mineralized dump BD1 and BD2.	Dump mining carried out from existing mineralized dump BD1 and BD2.	Nil
2b	Separate benches in topsoil overburden and mineral (Rule 15)	Not Proposed	Nil	Nil
2c	Stripping ratio or ore to OB ratio	Not Proposed	Nil	Nil
2d	Quantity of topsoil generation in m <sup>3</sup>	Not Proposed	Nil	Nil
2e	Quantity of overburden generation in m <sup>3</sup>	Not Proposed	9950 cum	Nil
2f	General remarks of Inspecting officer on development of pit w.r.t type of deposit etc.	Dump Mining carried out as proposed.		

**Exploitation (FY 2023-24):**

S. N.	Item	Proposals	Actual Work	Remarks
3a	Number of pits proposed for production	Not Proposed	Nil	Only dump mining carried out as per proposal
3b	Quantity of ROM mineral production proposed	3600 tones	3600 tones	Nil
3c	Recovery of Salable/usable minerals from ROM production	3600 tones	3600 tones	Nil
3d	Quantity of mineral reject generation	Not Proposed	Nil	Nil
3e	Grade of mineral reject generation and threshold value declared	Not Proposed	Nil	Nil
3f	Quantity of sub-grade mineral generation	20400 tones	Nil	The proposal has been reviewed in Review of Mining Plan approved dated 22/01/2025 for the proposal period 2025-26 to 2029-30
3g	Grade of sub-grade mineral generation	10-15% Mn	Nil	-do-
3h	Manual/Mechanized method adopted for segregation from ROM	Semi-Mechanized	Semi-Mechanized	Nil
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Not Proposed	Nil	Nil
3j	Provision of drilling & blasting in mineral benches	Not Proposed	Nil	Nil
3k	Provision of mining machineries in mineral benches	Yes	Yes	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Not Proposed	Nil	Only dump mining is proposed and carried out.
3m	Total area covered under excavation /pits (Ha.)	8.43 Ha	8.43 Ha	Nil
3n	Ore to OB ratio for the pit/mine during the year	Not Proposed	Nil	Only dump mining is proposed and carried out.

3o	Total area put in use under different heads at the end of year	27.985 Ha	25.773 Ha	Nil
3p	Production of ROM mineral during last five-years period, as Applicable	2019-20 – 1000 Tones 2020-21 - 3600 Tones 2021-22 - 3600 Tones 2022-23 - 3600 Tones 2023-24 - 3600 Tones	2019-20 - 800 Tones 2020-21 - 776 Tones 2021-22 - 2800 Tones 2022-23 - 3595 Tones 2023-24 - 3600 Tones	Nil
3q	General remarks of inspecting officer on method of mining etc.	Only dump mining carried out as per proposal		

**Solid Waste Management-Dumping:**

S.N.	Item	Proposals	Actual Work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32,33)	There was no proposal for top soil and OB generation. The mineral reject generated from dump mining will be stacked separately in mineral reject area demarcated in surface plan.	There was no generation of top soil. OB has been dumped in waste dump. There was no generation of mineral reject.	Nil
4b	Location of topsoil, OB & mineral reject dumps	There was no proposal for top soil and OB generation. Mineral Reject stacking was proposed between the coordinates: L1900 to L2080 and L(-) 160 to L(-) 40.	There was no generation of top soil. OB has been dumped in waste dump. There was no generation of mineral reject.	Nil
4c	Number of Dumps within lease area and outside lease area	Three dumps within the lease area as shown in Surface Plan.	Three dumps within the lease area as shown in Surface Plan.	Nil
4d	Location of Dumps w.r.t. ultimate pit limit (Rule 16)	Not proposed	Nil	Nil
4e	Number of Active & Alive dumps	Three waste dumps within the lease area as shown in Surface Plan	Three number of waste dumps are present within the lease area	Nil
4f	Number of dead dumps	Not Proposed	Nil	Nil
4g	Number of dumps established	Not Proposed	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there	Garland drain present all along the dump	Garland drain present all along the dump	Nil
4i	Length of Retaining wall or garland drain all along dump	Not Proposed	Nil	Nil
4j	Number of settling ponds	Not Proposed	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management	Overburden generated has been dumped in waste dump.		

**Solid Waste Management - Backfilling:**

S.N.	Item	Proposals	Actual Work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Not Proposed	Nil	Nil
5b	Area under backfilling of mined out area	Not Proposed	Nil	Nil
5c	Concurrent use of topsoil for restoration or	Not Proposed	Nil	Nil

	rehabilitation of mined out area (Rule 32)			
5d	Total area fully reclaimed & rehabilitated (Ha)	Not Proposed	Nil	Nil
5e	General remarks of inspecting officer on backfilling, reclamation etc	There was no proposal for backfilling.		

**Progressive Mine Closer Plan:**

S.N.	Item	Proposals	Actual Work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly-Rule 23E(2). Details should be given in the format as given in Annexure-20	The holder of a mining lease shall submit to the competent authority a yearly report as per the format specified by the Indian Bureau of Mines, before 1 <sup>st</sup> day of July report every year.	The annual return on PMCP has been submitted timely.	Nil
6b	Area available for rehabilitation (Ha)	Not Proposed	Nil	Nil
6c	Afforestation done (ha)	Not Specified	Nil	Nil
6d	No. of saplings planted during the year	1000 saplings	1000 saplings	Nil
6e	Cumulative no. of plants	Not Proposed	200 Nos	Nil
6f	Any other specific method of rehabilitation	Not Proposed	Nil	Nil
6g	Cost incurred on watch & care during the year	Not Proposed	Nil	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L X B X D).	Not Proposed	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Void filled by waste/tailings.	Not Proposed	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on the backfilled area.	Not Proposed	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir.	Not Proposed	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v) Any other specific means	Not Proposed	Nil	Nil
6m	Compliance of Rehabilitation of waste land within lease (i) Afforestation	Not Proposed	Nil	Nil
6n	Compliance of Rehabilitation of waste land within lease (ii) Area rehabilitated (ha) Method of rehabilitation	Not Proposed	Nil	Nil
6o	Compliance of Rehabilitation of waste land within lease (iii) Method of rehabilitation	Not Proposed	Nil	Nil
6p	Compliance of Environment monitoring (core zone & buffer zone)	Proposed	Carried Out	Nil
6q	General remarks of inspecting officer on PMCP compliance & progressive closer operations	PMCP report has been submitted timely		

**Mineral Conservation**

S.N.	Item	Proposals	Actual Work	Remarks
7a	ROM mineral dispatch or grade wise sorting within lease area	Grade-wise sorting	Grade-wise sorting	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Semi-mechanized	Semi-mechanized	Nil
7c	Different grade of mineral sort out at mine	Not Specified	25% to Below 35% Mn 35% to Below 46% Mn	Nil
7d	Any beneficiation process at mines	Not Proposed	Nil	Nil
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Grade wise sorting carried out as proposed.		

**Environment**

Sl. N.	Item	Proposals	Actual Work	Remarks
8a	Separate removal and utilization of topsoil (Rule32)	Not Proposed	Nil	Nil
8b	Concurrent use or storage of topsoil	Not Proposed	Nil	Nil
8c	Separate dumps for overburden waste rock, rejects and fines (Rule 33)	The mineral reject generated from dump mining will be stacked separately in mineral reject area demarcated in surface plan.	OB has been dumped in waste dump. There was no generation of mineral reject.	Nil
8d	Use of overburden, waste rock, rejects and fines dump for restoring the land to its original use	Not Proposed	Nil	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not Proposed	Nil	Nil
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	1000 saplings	1000 saplings	Nil
8g	Survival rate	Not Proposed	70%	Nil
8h	Water sprinkling on roads to control airborne dust	Proposed	Carried out	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mine area	Aesthetic beauty in and around mines is maintained.		

**Compliance of Rule 45 (2023-24):**

S.N.	Item	Comments	Remarks
9a	Status of submission of monthly and Annual returns	Annual Return for 2023-24 have been submitted timely	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer, Geologist and Manager have been employed in the mines.	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O-C) Workings : 8.43 Ha, Used for waste disposal: 12.75 ha; Occupied by plant, buildings, residential, welfare buildings and roads: 0.621 etc.	Nil
9d	Scrutiny of Annual return on afforestation	1000 saplings planted	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	Mineral reject generated has not been reported in annual return submitted.	The deviation has been pointed to the lessee through violation letter.
9f	Scrutiny of Annual return on ROM stock and/or grade ore	Closing stock of graded ore <25% Mn: 75.00 Tonnes 25 to <35% Mn: 2177.6 Tonnes	Nil

		35 to < 46% Mn: 66.800 Tonnes	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production costs	The ex-mine price: <25% Mn – Rs. 2630 25 to <35% Mn – Rs. 5037 35 to < 46 % Mn – Rs. 12797.17	Nil
9i	Scrutiny of Annual return on Fixed assets	Nil	Nil
9k	Scrutiny of Annual return on mining Machineries	Shovel (Hydraulic)- 1no; Tipper: 2 no.	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
Nil			

**Date:**

**(SUDIP RANJAN MAZUMDAR)**  
Indian Bureau of Mines