

MCDR INSPECTION REPORT

1	Name of Inspecting officer:	Shri Sudip Ranjan Mazumdar
2	Designation	Senior Mining Geologist
3	Accompanying mine official with Designation	Shri Bhuneswar Singh Karpe, Mine Manager Shri B Koteswar Rao, Mining Engineer Shri Subhransu Pani, Geologist Shri Rajesh Manke, Surveyor
4	Date of Inspection	20/07/2023
5	Previous Inspection date	04/03/2022

Part-I: General

S.No	Particulars	Details
1	Name of the Mine	SITAPATORE MANGANESE MINE
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total Lease area: 43.35 Ha. Forest Land: - 43.35 Non Forest Land: Nil
3	Mine code	40MPR01016
4	IBM Registration Number under rule 45 of MCDR,1988	IBM/5711/40MPR01016
5	Name of the lessee, Address, Phone, email and fax number	M/s MOIL LIMITED, (A Government of India Enterprise) MOIL Bhawan, 1A, Katol Road, Nagpur-440013 Email: moilindia_ngp@sancharnet.in Telephone: 0712-2590775 Fax: 0712-2592073
6	Village	Sitapatore
7	Taluka/Mandal	Sitapatore
8	District	Balaghat
9	Pin code	481449
10	State	Madhya Pradesh
11	Post Office	Tirodi
12	Nearest Police Station	Tirodi
13	Nearest Railway Station	Tirodi
14	Date of opening of Mine	01/07/1962
15	Name of the Nominated Owner with Address, 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: mma@moil.nic.in Date of Appointment: 10/01/2022
16	Name of the Mine Agent with Address, 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

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17	Name of the Mine Manager with Address, phone, email, fax number and date of appointment in mines	Shri Bhuneswar Singh Karpe, MOIL LIMITED, Sitapatore Mine, District – Balaghat (M.P.) 481449 Phone: 9685529162 Fax: NA Email: mm.sp@moil.nic.in Date of Appointment: 29/01/2022
18	Name of the Mining Engineer, Qualification and total experience with address, phone, email, fax number and date of appointment in the mine	Shri B. Koteswar Rao, MOIL LIMITED, Tirodi Mine, District – Balaghat (M.P.) 481449 Qualification: B.Tech (Mining) Experience: 8+ years Phone:9479729174 Fax: NA Email: bkrao.nitr@gmail.com Date of Appointment:04/05/2018
19	Whether Geologist and Mining Engineer appointment in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Yes Appointed Shri Subhransu Pani MOIL LIMITED, Tirodi Mine, District – Balaghat (M.P.) 481449 Qualification: M.Tech in Applied Geology Experience: 7+ years Phone: 9938217777 Fax: NA Email: sp300391@gmail.com Date of Appointment: 18.11.2019
20	Date of Approval of Mine Plan/Modified Mine Plan with five-year period and specific condition in approval letter, if any.	Mining Plan approved dated 11.04.2022
21	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five- year period and specific condition in approval letter, if any.	Mining Plan approved dated 11.04.2022
22	Mineral(s) granted in lease and approved for Mining	Manganese Ore
23	Method of Mining (Opencast, Underground)	Open Cast & Dump Mining
24	Category (Fully Mechanized, Others or Manual)	Category A
25	Captive/Non-Captive	Non-captive

Details about Mining Plan/ Mining Scheme

a) Letter No. and date of approval of mining plan	:	Mining plan approved vide letter no: MP/Balaghat/Manganese/MPLN/G-05/2021-22 dated 11.04.2022
b) Letter No. and date of approval of mining scheme.	:	Mining plan approved vide letter no: MP/Balaghat/Manganese/MPLN/G-05/2021-22 dated 11.04.2022
c) Condition while approving the MP/ MS/ modification	:	Nil
d) Period of mining plan/ mining scheme in force :	:	From 2022-23 to 2026-27

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.N.	Item	Proposals	Actual Work	Remarks
1a	Backlog of previous year	Nil as the Mining plan period from 2023-23 to 2026-27	Nil	There is no backlog of the previous year exploration.
1b	Exploration over lease area for Geological axis 1 or 2.	In 2022-23, 32 numbers of boreholes was proposed to be drilled.	In 2022-23, 36 numbers of boreholes have been drilled. However, these boreholes have not been drilled as per their proposed location shown in the approved Surface Geological plan.	The deviation has been pointed out to the lessee in form of violation letter
1c	Exploration Agency & Expenditure in Lakh Rupees during the year	Not Proposed	Exploration Agency: M/s Central Drilling Associate Expenditure: Rs 89.33 Lakhs	Nil
1d	Balance area to be explored to bring the Geological axis in 1 or 2.	Area under exploration G1: 1.82 Ha; Area proved as non-mineralised: 0.14 Ha and area to be explored 41.39 Ha	In 2022-23, 36 numbers of boreholes have been drilled.	Nil
1e	Balance reserves as on 01.04.2023	At the beginning of the year 2021-22, reserve was 131097.3 tones. Assessed during the year 387815.37 tones.	Depletion of reserves during the year 10271 tones. Balance reserves as on 31.3.2023 was 508641.67 tones	Reserves as reported in annual return for 2022-23.
1f	General remarks of Inspecting officer on geology, exploration etc.	In 2022-23, 36 numbers of boreholes were drilled. However, these boreholes have not been drilled as per their proposed location shown in the approved Surface Geological plan.		

2. Development

S.N.	Item	Proposals	Actual Work	Remarks
2a	Location of Development w.r.t. lease area	Development Proposed from Pit 3, Pit 6 and from mineralized dump located in southern part of the lease.	Development carried out from Pit 6 and mineralized dump located in southern part of the lease but from different part of the pit and dump. Further, Pit 3 was not put in production and development.	Deviation has been pointed out to lessee through violation letter.
2b	Separate benches in topsoil overburden and mineral (Rule 15)	Separate bench in topsoil not proposed. Separate benches in overburden and ore are proposed.	There is no separate bench in the topsoil. Separate benches in overburden and ore maintained.	Nil
2c	Stripping ratio or ore to OB ratio	Stripping ratio proposed from Pit 6 was 1:16 m ³ /tonne while stripping ratio proposed from pit 3 was 1:09 m ³ /tonne	Actual Stripping ratio from Pit 6 was 1:9.5 m ³ /tonne	Nil
2d	Quantity of topsoil generation in m ³	Not Proposed	Nil	Nil
2e	Quantity of overburden generation in m ³	OB Proposal from Pit 3: 32595 m ³ and from Pit 6 was 70650 m ³ . Total overburden generation	Overburden generated during the year was 94751.25 m ³ .	Deviation has been pointed out to lessee through violation letter.

		proposal was 103245 m3	
2f	General remarks of Inspecting officer on development of pit w.r.t type of deposit etc.	Development have only been carried out from Pit 6 and not from Pit 3 as proposed. Further, the overburden removal was less than proposed. Deviation has been pointed out to lessee through violation letter.	

3. Exploitation FY 2022-23

S. N.	Item	Proposals	Actual Work	Remarks
3a	Number of pits proposed for production	Two Pits namely Pit 3 & Pit 6	One Pit namely Pit 6	Production was not carried out from Pit 3
3b	Quantity of ROM mineral production proposed	Proposed Production: 19500 tonnes	Actual Production: 16966.98 tonnes	Nil
3c	Recovery of Salable/usable minerals from ROM production	17000 tones	16966.98 tonnes	Nil
3d	Quantity of mineral reject generation	2500 tones	Mineral reject not generated	Nil
3e	Grade of mineral reject generation and threshold value declared	10-20% Mn	Mineral reject not generated	Nil
3f	Quantity of sub-grade mineral generation	2500 tones	Mineral reject not generated	Nil
3g	Grade of sub-grade mineral generation	10-20% Mn	Mineral reject not generated	Nil
3h	Manual/Mechanized method adopted for segregation from ROM	Semi-Mechanized open cast mining with manual sorting	Semi-Mechanized open cast mining with manual sorting	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	Yes	Yes	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	Height of bench in OB is 7.5m and in Ore 5m	Height of the benches maintained.	Nil
3m	Total area covered under excavation /pits (Ha.)	Total area covered under excavation/pits at the start of the 2022-23 is 5.619 Ha	Total area covered under excavation/pits is 4.25 Ha	Nil
3n	Ore to OB ratio for the pit/mine during the year	Stripping ratio proposed from Pit 6 was 1:16 m3/tonne while stripping ration proposed from pit 3 was 1:09 m3/tonne	Actual Stripping ratio from Pit 6 was 1:9.5 m3/tonne	Nil
3o	Total area put in use under different heads at the end of year	Total area put in use under different heads at the end of year will be 22.65 Ha	Total area put in use under different heads at the end of year is 19.31 Ha	Nil
3p	Production of ROM mineral during last five-years period, as Applicable	2018-19 – 16900 Tonnes 2019-20 - 16900 Tonnes 2020-21 - 16900 Tonnes 2021-22 - 16900 Tonnes 2022-23 – 17000 Tonnes	2018-19- 16899 Tonnes 2019-20- 16754.18 Tonnes 2020-21- 16615 Tonnes 2021-22- 16898 Tonnes 2022-23- 16966.98 Tonnes	Nil

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3q	General remarks of inspecting officer on method of mining etc.	Production was not carried out from Pit 3. Deviation has been pointed out to lessee through violation letter.
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4. 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 generation. OB generated will be disposed in Dump1 (reclaimed area-Pit8) and Dump2 (old waste dump). Mineral rejects will be stacked separately in the area proposed for mineral reject dump.	There was no stacking of top soil. There was no generation of mineral reject and hence there was no stacking of mineral reject. Overburden has been disposed in the proposed Dump1.	Nil
4b	Location of topsoil, OB & mineral reject dumps	Stacking of top soil was not proposed. OB proposed for disposal in Dump1 between coordinates (N2397540 to N 2397768 and E362820 to E362990) and in Dump 2 between coordinates (N2698032 to N2398120 and E3622094 to E362386). Mineral reject dump proposed between the coordinates N2397432 to N2397540 and E362580 to 362690.	There was no stacking of top soil. There was no generation of mineral reject and hence there was no stacking of mineral reject. Overburden has been disposed in the proposed Dump1.	Nil
4c	Number of Dumps within lease area and outside lease area	Number of dumps within lease area 6 Nos, Outside lease area: Nil	Number of dumps within lease area 6 Nos; Outside lease area: Nil	Nil
4d	Location of Dumps w.r.t. ultimate pit limit (Rule 16)	Only Mineralized dump within the UPL.	Only Mineralized dump within the UPL.	Dump re-handling is taking from Mineralized dump
4e	Number of Active & Alive dumps	Number of active dumps is 6	Number of active dumps is 6	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 is present all along the dumps	Garland drain is present all along the dumps	Nil
4i	Length of Retaining wall or garland drain all along dump	Length of Retaining wall: 25m; Length of garland drain: 100m	Length of garland drain constructed was 100m. Length of retaining wall constructed was 100m.	Nil
4j	Number of settling ponds	Nil	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management	Solid waste management was carried out as per proposal.		

5. Solid Waste Management-Backfilling

S.N.	Item	Proposals	Actual Work	Remarks
5a	Status on part or full extraction of mineral from	Not Proposed	Nil	Nil

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	mined out area before starting backfilling			
5b	Area under backfilling of mined out area	Not Proposed	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Not Proposed	Nil	Nil
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.		

6. Progressive Mine Closure 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 st 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)	0.18 Ha.	2.0 Ha.	Nil
6d	No. of saplings planted during the year	300 nos	5000 nos	Nil
6e	Cumulative no. of plants	Not Proposed	10600 Nos	Nil
6f	Any other specific method of rehabilitation	Not Proposed	Nil	Nil
6g	Cost incurred on watch & care during the year	Rs 250/plant	Rs 308/plant	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

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6p	Compliance of Environment monitoring (core zone & buffer zone)	Within Permissible limits	Within Permissible limits	Nil
6q	General remarks of inspecting officer on PMCP compliance & progressive closer operations	The PMCP compliance was carried out.		

7. 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.		

8. Environment

S.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)	There was no proposal for top soil generation. OB generated will be disposed in Dump1 (reclaimed area-Pit8) and Dump2 (old waste dump). Mineral rejects will be stacked separately in the area proposed for mineral reject dump.	There was no stacking of top soil. There was no generation of mineral reject and hence there was no stacking of mineral reject. Overburden has been disposed in the proposed Dump1.	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)	Not Specified	5000 nos	Nil
8g	Survival rate	Expected survival rate: 70%	Survival rate: 90%	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.		

9. Compliance of Rule 45 (2022-23)

S.N.	Item	Comments	Remarks
9a	Status of submission of monthly and Annual returns	Annual Return for 2022-23 have been submitted on 30.06.2023 and monthly return for June'23 have been submitted by 09.07.2023.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer,	Mining Engineer, Geologist and Manager have been employed in the mines.	Nil

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	Geologist and Manager		
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Already exploited and abandoned by opencast (O-C) mining: 0.91 Ha; Covered under current (O-C) Workings: 4.25 Ha; Used for waste disposal: 7.64 Ha; Occupied by plant, buildings, residential, welfare buildings and roads: 1.72 Ha; Work done under progressive mine closure plan during the year: 2 Ha.	Nil
9d	Scrutiny of Annual return on afforestation	Number of saplings planted during the year : 5000 Nos	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	Mineral reject generation was Nil.	Nil
9f	Scrutiny of Annual return on ROM stock and/or grade ore	Closing stock of ROM was Nil	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production costs	The ex-mine price for 25% to below 35% Mn is Rs 7239.34/tonne and 35% to blow 46% is Rs14051.09. Cost of production Rs 3877.76/tonne.	Nil
9i	Scrutiny of Annual return on Fixed assets	Value of Fixed Assets Rs 9232801	Nil
9k	Scrutiny of Annual return on mining Machineries	Shovel (Hydraulic)- 1no; Dozer: 1no; tipper: 2no; Blast hole drill: 1no; Front end loader: 1no etc.	Nil

Details of violations observed during current inspection and compliance position of earlier violation pointed out:-

Compliance position of earlier violation pointed out	
Date of last Inspection	04/03/2022
Type of Inspection	Mining Plan Inspection
Inspection Officer	Shri Naresh Kumar Katariya, DCOM
Violations Pointed Out	Nil

Violations pointed out during Current Inspection	
Date of Current Inspection	20/07/2023
Type of Inspection	Modification of Mining Plan Inspection
Inspection Officer	Shri Sudip Ranjan Mazumdar, SMG
Violations Pointed Out	Violation of rule 11(1), 12(4) and 45(7) of MCDR 2017 has been issued dated 28.07.2023

(Sudip Ranjan Mazumdar)
Senior Mining Geologist