

INDIAN BUREAU OF MINES
MCDR INSPECTION REPORT
Bhubaneswar Region

General

SL. No.	Particulars	Details
1.	Name of the Mine	Bolani Manganese & Iron Ores Mines, 6.9 Sq. Mile Lease. 1586.36 Ha
2.	Date of Inspection	07.11.2024
3.	Name of Inspection officer:	Sh. Rohita Sethi, Assistant Controller of Mines
4.	Name of official accompanying inspection	Sh. Umesh Kumar Bhasker, Mines Manager Sh. Radhakanta Jena (GM-E&L), Sh. B N Singh (DGM-Mines) Sh. S K Deo (DGM-Mines) Sh. Rajendra Prasad Mondal (AGM-Geology) Sh. Swarup Sahoo (Surveyor)
5.	Last date of Inspection & Officer	Last inspection date: 05.07.2021 Sh. Ramkishan R, Sr. ACOM
6.	Total Lease Area (Ha) with breakup of non-forest and forest land	1586.36 Ha Forest area : 723.312 Ha Non Forest area : 863.048 Ha
7.	Mine code	30ORI08114
8.	IBM Registration Number under rule 45 of MCDR, 2017	IBM/5662/2011
9.	Name of the lessee, Address, phone, email and fax number.	Steel Authority of India Limited, Ispat Bhawan, Lodhi Road, New Delhi-110003
10.	Village	Bolani
11.	Taluka/Mandal	Barbil
12.	District	Keonjhar
13.	Pincode	758037
14.	State	Odisha
15.	Post office.	Bolani
16.	Nearest police station	Bolani
17.	Nearest Railway station	Barbil (10 Km)
18.	Date of Grant of Mining Lease	14.11.1962 (20 Years)
19.	Date of Execution	14.11.1962
20.	Date of opening of Mine	April 1966 (As per approved Mining Plan records)
21.	Date of expiry	13.11.2032
22.	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri Atanu Bhowmick Director In-Charge, Rourkela Steel Plant, M/s SAIL Nominated Owner of Odisha Group of Mines Steel Authority of India Ltd. Rourkela - 769011

		Phone No. 0661-2510018/24447527 Email-id: rsp.director@sail.in Date of appointment: 11/02/2022
23.	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri Joydev Chattopadhyay , CGM (Mines) Bolani Ores Mines Steel Authority of India Ltd. Rourkela Steel Plant (OGOM) At/Po: Bolani, Dist: Keonjhar State: Odisha, Pin: 758037 Phone No. 8895502970 Fax No. 06767-260172 Email-id: cgbom.rsp@sail.in Date of appointment: 03/05/2021
24.	Name of the Mines Manager with Address, mobile no, email, fax number and date of appointment in mine	Shri U.K.Bhasker , GM (Mining) & Mines Manager Bolani Ores Mines Steel Authority of India Ltd. Rourkela Steel Plant (OGOM) At/Po: Bolani, Dist: Keonjhar State: Odisha, Pin: 758037 Phone No. 9174739231/ 8895503579 Fax No. 06767-260172 Email-id: bommines@gmail.com Date of appointment: 04/08/2023
25.	Name of the Mining Engineer , Qualification and total experience with Address, mobile no, email, fax/ phone number and date of appointment in mine	Shri D. K. Dubey , DGM (Mining) Qualification: B.Tech (Mining Engineering) Experience: Above 24 Years Date of Appointment in mine: 01/06/2023 Phone No. 9470194941 Fax No. 06767-260172 Email-id: dubey.deepak@gmail.com
26.	Name of the Geologist , Qualification and total experience with Address, mobile no, email, fax number and date of appointment in mine	Shri S R Tirkey Designation: AGM (Geology) Qualification: M.Sc Tech (Geology) Experience: Above 13 Years Date of Appointment in mine: 01/06/2023 Phone No. 9437578420 Email-id: geologybom2024@gmail.com rpmondal@sail.in
27.	Date of Approval of Mining Plan/Review of Mining Plan/ their modifications with five-year period and specific condition in approval letter, if any.	Mining Plan: Approved Letter No. 314(3)/91-MCOM(C)/ MP-34, Nagpur dated 21.02.1992 Mining Plan: Approval Letter No. MP/OTF.MECH /08-ORI / BHU/2010-11 dated 06.08.2010, Approved Under Rule 24A of MCR 1960, Valid upto 31.03.2030 & (5 yearly Period: 2010-2015). Mining Scheme: Date of approval: 27.03.2018 for the period 2015-2020 Review of Mining Plan: Date of approval : 13.11.2019 for the Period 2020-2025 Modification of Review of Mining Plan: Date of approval : 05.08.2021 for the Period 2021-2025
28.	Mineral (s) granted in lease and proved for mining.	Manganese and Iron Ore (Hematite)

29.	Method of Mining (Opencast, Underground)	Opencast
30.	Category (Fully Mechanized, Others or Manual)	Fully Mechanized
31.	Captive/Non-Captive	Captive
	Present EC Capacity	15000 TPA

Exploration:-

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
1a	Backlog of previous year	267 nos. bore holes with 88100mtrs for the year 2021-22	Nil	Mining operation was resumed on 16/03/2023.
1b	Exploration over lease area for Geological axis 1 or 2.	No proposal	G1-12.30 Ha. G2-2.04 Ha. G4-1568.55	Nil
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Nil	Nil	Core drilling started from 2024-25 by M/s. Thriveni and is continuing.
1d	Balance area to be explored to bring Geological axis in 1 or 2	1568.55 Ha.	1568.55 Ha.	Nil
1e	Balance reserves as on 01.04.2024. (Proved + Probable)	As on 01.04.2021 Manganese Ore: 111-3,99,837 tonnes 221-18600 Iron Ore: 111-3,74,900 tonnes <u>211-26700</u>	Manganese Ore: 111-3,97,500 tonnes 221-18600 Iron Ore: 111-3,74,900 tonnes <u>211-26700</u>	Depletion of reserve 2337 tonnes of manganese ore produced in the year 2023-24
1f	General remarks of inspecting officer on geology, exploration etc.	Mining operation was resumed on 16/03/2023 and the Lessee has started the core drilling work from 2024-25 as proposed in the year 2021-22 and is continuing. Lessee has proposed the exploration work in accordance with rule 12(4) of MCDR-2017 in the approved RMP vide dated 23/01/2025.		

Development:-

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
2a	Location of development w.r.t. lease area	Q-5: 329960E-330081E/	Q-5: Nil	No mining operation has been carried out in Q-5 violation issued

		2447346N- 2447482N Q-10: 328025E-328104E/ 2443476N- 2443555N	Q-10: 328025E- 328104E/ 2443476N- 2443555N	under Rule 11(1) of MCDR-2017
2b	Separate benches in topsoil, overburden and mineral	Separate benches will be done for topsoil, OB waste and mineral bearing zone.	As per proposal	Nil
2c	Stripping ratio or Ore to OB ratio	1 : 1.315	1 : 1.834	Nil
2d	Quantity of topsoil generation in m3	No top soil will be generated during the year.	Nil	Nil
2e	Quantity of overburden generation in m3	19600	4286	Nil
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	For the year 2023-24 there was a proposal to produce 11600 tonnes of ROM from quarry-5. It is observed that no excavation has been carried out from quarry-5, for which violation issued under Rule 11(1) of MCDR-2017.		

Exploitation:-

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
3a	Number of pits proposed for production	2 nos. of pits (Q-5 & Q-10) are proposed for production. Q-5: 329906E-330059E/ 2447354N- 2447473N Q-10: 328042E-328104E/ 2443476N- 2443541N	1 no. Q-10	No mining operation has been carried out in Q-5 violation issued under Rule 11(1) of MCDR-2017
3b	Quantity of ROM mineral production proposed	14900 T	2337 T	Violation issued under Rule11 (1) of MCDR- 2017 for less production.
3c	Recovery of salable/usable mineral from ROM production	9000 T	1797 T	Major variation observed in grade of Manganese Ore that is mineral Reject (10- 25%Mn), produced in the mine with respect to the approved proposal, Violation issued under Rule11 (1) of MCDR-

				2017.
3d	Quantity of mineral reject generation	5900 T	540 T from unprocessed ore	Violation Issued_under Rule11 (1) of MCDR-2017
3e	Grade of mineral reject generation and threshold value declared	Grade of mineral reject: 10-25% Mn Threshold value: 10%	Grade of mineral reject: 15.00% Mn Threshold value: 10%	Nil
3f	Quantity of sub-grade mineral generation	5900 T	540 T	Nil
3g	Grade of sub-grade mineral generation	10-25% Mn	Grade of mineral reject: 15.00% Mn	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Manual sizing and sorting of Mn ore	As per proposal	Nil
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Nil	Nil	Nil
3j	Provision of drilling & blasting in mineral benches	Deep hole drilling and blasting	Drilling & blasting carried out as per the proposal during the reporting year.	Nil
3k	Provision of mining machineries in mineral benches	Excavator and Dumper combination.	As per proposal	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes, height of benches proposed as 6m and width is 12m in ore as well as waste bearing benches.	As per proposal	Nil
3m	Total area covered. under excavation/pits	87.16 Ha.	87.16 Ha.	Nil
3n	Ore to OB ratio for the pit/mine during the year	1 : 1.315	1 : 1.834	Nil
3o	Total area put in use under different heads at the end of year	NA	Area covered by pits- 87.16Ha. Waste dump- 7.37Ha. Infrastructures & Roads- 176.65Ha.	Nil

			Any other-90.44	
3p	Production of ROM mineral during last five-years period , as applicable	2019-20: 15000 T 2020-21: 15000 T 2021-22: 15000 T 2022-23: 14900 T 2023-24: 14900 T	2019-20: Nil 2020-21: Nil 2021-22: Nil 2022-23: Nil 2023-24: 2337 T	No production till 2022-23 due to Stage-II forest clearances
3q	General remarks of inspecting Officer on method of mining etc.	It is observed that only 15.67% of production has been achieved against the proposed production. Also it is observed that there is a major variation in grade of Manganese Ore that is mineral Reject (10-25%Mn), produced in the mine with respect to the approved proposal and actual generation of waste is only 21.86% of the proposed waste. Violation issued under Rule 11(1) of MCDR-2017.		

Solid Waste Management-Dumping:--

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Separate dump yard for OB and Mineral Reject proposed in the approved review of mining plan. No top soil will be generated during the ensuing plan period.	As per proposal	Nil
4b	Location of topsoil, OB & mineral reject dumps	Co-ordinated of proposed OB dumps & mineral reject dumps are as below: WD-1 Near Quarry-5: 330020E-330095E/ 2447400N-2447250N WD-2: Quarry-10: 328006E-328051E/ 2443467N - 2443520N	Co-ordinated of actual OB dumps are as below: WD-2: Quarry-10: 328006E-328051E/ 2443467N - 2443520N	No excavation from Q-5 and no waste dumping at WD-1
4c	Number of dumps within lease area and outside lease area	Dump within lease area: 09 Nos. Dump outside lease area: Nil	Dump within lease area: 09Nos. Dump outside lease area: Nil	02 Fines dump available inside the lease area.
4d	Location of dumps w.r.t. ultimate pit limit	All the dump sites located outside the upl	All the dump sites located outside the upl	Nil

4e	Number of active & alive dumps	2 nos.	1 no. in Quarry 10	Nil
4f	Number of dead dumps	5 nos.	5 nos.	Nil
4g	Number of dumps stabilized	No Proposal	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there	No Proposal	Nil	Nil
4i	Length of Retaining wall or garland drain all along dump	No Proposal	Nil	Nil
4j	Number of settling ponds	No Proposal	Nil	Nil
4k	Specific comments of inspection Officer on waste dump management	Overburden wastes and mineral reject management are being carried out as per the approved proposals.		

Solid Waste Management-Backfilling:-

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	No Proposal	Nil	Nil
5b	Area under backfilling of mined out area	No Proposal	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area	No Proposal	Nil	Nil
5d	Total area fully reclaimed & rehabilitated	No Proposal	Nil	Nil
5e	General remarks of inspecting Officer on backfilling and reclamation etc.	Existing pits were not matured for backfilling as ore/mineral not exhausted completely.		

Progressive Mine Closure Plan: ---

SL.N.	Item	Proposals (FY 2023-24)	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2). (Hard copy same provided)	Annual report on PMCP to be submitted by 1st July of every year.	Submitted on time	Nil
6b	Management of worked/ mined out benches/dumps i) Area available for rehabilitation (ha) ii) Afforestation done (ha) iii) No. of saplings planted during the year iv) Cumulative no. of plants v) Any other specific method of rehabilitation vi) Cost incurred on watch & care during the year	No Proposal	Nil	Nil
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	No Proposal	Nil	Nil
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	4000 plantation were planned on 1.5 ha degraded lands within ML during 2023-24 for rehabilitation of waste land within ML	9000no's of saplings plantation done on 21.4 ha degraded lands within ML during 2023-24 for rehabilitation of waste land within ML	Nil
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Regular monitoring of air water and noise done in core and buffer zones	Regular monitoring of air water and noise done in core and	Nil

		monitoring by outsourcing to NABL accredited agency	buffer zones monitoring by outsourcing to NABL accredited agency.	
6f	General remarks of inspecting Officer on PMCP compliance & progressive closure, operation etc.	Lessee has implementing PMCP proposals as per approved modified RMP.		

Mineral Conservation:-

SL.No.	Item	Proposals ((FY 2023-24)	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Ore/mineral sorting manually within lease area.	As per proposal	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Manual	Manual	Nil
7c	Different grade of mineral sorted out at mines	Manganese - 10-25%Mn and >25%Mn	As per proposal	Nil
7d	Any beneficiation process at mines	No Proposal	Nil	Nil

Environment:-

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
8a	Separate removal and utilization of topsoil	No Proposal	Nil	No top soil generation
8b	Concurrent use or storage of topsoil	NA	Nil	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines	Separate dumps are to be maintained for OB, waste rock, mineral rejects and fines.	As per proposal	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No Proposal	Nil	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc.)	No Proposal	Nil	Nil

8f	Baseline information on existence of plantation & additional plantation done	4000 saplings are proposed for plantation for rehabilitation of Waste land WML by mode of plantation covering 1.50 Ha. area	9000 plantation done on 21.4 ha during 2023-24	About 140000 No. of Saplings (as on 01.04.2024) are planted in waste / barren land.
8g	Survival rate	NA	>90 %	Nil
8h	Water sprinkling on roads to control airborne dust	Frequent sprinkling of water on haul roads by mobile sprinklers.	As per proposal	Nil

Compliance of Rule 45

SL.No.	Item	COMMENTS		Remarks.
9a	Status of submission of Monthly and Annual returns	Monthly returns under Rule 45(5) (b)(i) of MCDR 2017 by 10th day of every month. Annual Return in Form G1 to be submitted under Rule 45(5)(c)(i) of MCDR 2017 by 1st July of every year.	Timely Submitted by online mode in every month. Annual return in Form G1 is submitted on date 20.06.2024.	-----
S.N.	Item	Details given in A.R. for the year 2023-24	Observation of I/ Officer	-----
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Sh. Umesh Kumar Bhasker, Mines Manager Sh. Shri D. K. Dubey, mining Engineer Shri S R Tirkey Geologist	Actual also the same	-----
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area covered by pits- 87.16 Ha. Waste dump- 7.370Ha. Reclaimed /Rehabilitated Area- Nil Infrastructures & Roads- 176.65 Ha.	Actual also as per AR at that time.	-----
9d	Scrutiny of Annual return on afforestation	During the year 9000 saplings planted WML and 5583 saplings planted OML	Actual also as per AR	-----

9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Quantity- 540 T (15% Mn) from unprocessed ore	Violation issued for less major variation in grade of Manganese Ore that is mineral Reject (10-25%Mn), produced in the mine with respect to the approved proposal.	-----
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing Stock ROM-1137.31T Below 25% Mn-63.80	Appears to be correct	-----
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Below 25% Mn-2463.80	Appears to be correct	-----
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets: Rs.55568842/-	Appears to be correct	-----
9i	Scrutiny of Annual return on mining machineries	Back Hoe-1no. Dumper-02 no's Water Tanker-01 No's	Observed to be correct.	-----

(10) Violation observed during current inspection and compliance position of earlier

Violation pointed out:

(a) Compliance position of earlier violation pointed out: During last inspection dated 05/07/2021, no violation observed.

(b) During current inspection: The violation of Rule 11 (1) of MCDR 2017 have been observed and the violation letter issued on 23/01/2025.

(11) The lessee was submitted DAI/drone survey data under rule 34A for FY 23-24 on 23/06/2024.

Rohita Sethi
Assistant Controller of Mines