

MCDR INSPECTION REPORT

General

S N	Particulars	Details
1	File no	
2	Name of the Mine & Mine code	Khandbandh Iron Ore Mine Minecode-30ORI08036
3	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total lease area-366.311 Ha Forest Area-345.189 Ha Non-Forest Area-21.122 Ha
4	Name of inspecting officer	Vikram Deshpande, ACOM, BBSR
5	Date of Inspection	27/04/2023
6	Name of official accompanying inspection	Shri Nishikant Samal, Mines Manager
7	IBM Registration Number under rule 45 of MCDR, 1988	IBM/4269/2011
8	Name of the lessee, Address, phone, email and fax number	M/s. The Orissa Mining Corporation Ltd. A Govt. Of Orissa Undertaking, OMC House, Unit-5, Post Box No. 34, Bhubaneswar info@odishamining.in md@odishamining.in 0674-2393431, 0674-2391629
a)	Village	Khadbandh
b)	Taluka/Mandal	Barbil
c)	District	Keonjhar
d)	Pincode	758034
e)	State	Odisha
f)	Post office	Bamebari
9	Nearest police station	Bamebari
10	Nearest Railway station	Jaroli
11	Email	manager.khandabandh@gmail.com
12	Phone	9437713068
13	Date of Grant of Mining Lease	30/11/1963
12	Date of Execution with lease period	70 years
13	Date of opening of Mine	30/11/1993
14	Date of first Renewal/ extension of lease registration	Not applicable
15	Lease expiry date	29/11/2033
	Mine Address	Mines Manager, Khandabandh Iron Ore Mines, M/s- OMC Ltd. At/Po- Khandabandh, Ps- Bamebari, Via- Joda, Dist- Keonjhar, Pin- 758034.
16	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Sri. Balwant Singh, IAS, MD M/s. The Orissa Mining Corporation Ltd. A Govt. Of Orissa Undertaking, OMC House, Unit-5, Post Box No. 34, Bhubaneswar
17	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri Abanikanta Pradhan Regional Manager, OMC Ltd. At/Po: Barbil -758035
18	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Sri Nishikanta Samal, At/Po- Khandabandh, Ps- Bamebari, Via- Joda, Dist- Keonjhar, Pin- 758034. Email: manager.khandabandh@gmail.com, date of appointment: 25-10-2021.

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19 20	Name of the Mining Engineer & Geologist, Qualification and total experience	Mining engineer Qualification Date of appointment Address phone/email	Sri Satyanarayan Mohanty, B Tech in mining Engineering 14 years experience. At/Po- Khandabandh, Ps- Bamebari, Via- Joda, Dist-Keonjhar, Pin- 758034. Email: manager.khandabandh@gmail.com, date of appointment in mine:15/10/2021
		Geologist Qualification Date of appointment Address phone/email	Mr.Biswajit Basak, MSc, (Applied Geology),9 years experience. At/Po- Khandabandh, Ps- Bamebari, Via- Joda, Dist-Keonjhar, Pin- 758034
21	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.		yes
22	Date of Approval of Review of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.		Letter No. BBS/KJR/IRON/2193/RMP/2022-23 Dtd.29.12.2022.
23	Present mining plan validity -		2023-24 to 2027-28
24	Mineral(s) granted in lease and proved for mining		Iron Ore
25	Method of Mining(Open cast, Underground)		Open cast
26	Category (Fully Mechanised, Others or Manual)		Fully Mechanised
27	Captive/Non Captive		Non-Captive
28	Environment Clearance grant date & limit of EC.		1 MTPA, 15/12/2008 .
29	CTO		Iron Ore – 1 MTPA

PART - II: OBSERVATION/COMMENTS OF INSPECTING OFFICERExploration :

Sl.N	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	None	None	
1b	Exploration over lease area for geological axis 1 or 2	122 No. Boreholes	138 boreholes	G1 – 343.122Ha G2 – 12.221 Ha G3 – 10.968 Ha
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Rs.6 Crore (Approx.)	M/s- Maheswari Mining Pvt. Ltd Rs.1.762 Crore (Approx)	
1d	Balance area to be explored to bring Geological axis in 1 or 2	None	Nil	
1e	Balance reserve as on 01/04/2023	As per approved mining plan dated 18/04/2022 the reserves are: 111-21.032 MT 121-00 122-00	Reserves as on 01/04/2023 are: 111-20.431 MT 121-00 122-00	
1f	General remarks of inspecting officers on geology, exploration etc	The ML area exhibits limited rock types of Iron Ore group and area classified into six deposits viz. I to VI. The general strike of foliation is NNE-SSW dipping towards ESE. The area has been adequately explored.		

Development:

Sl.N	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Deposit-I 2427742N to 2428055N & 334463E to 334808E Deposit-V 2428372N to 2428622N & 334956E to 335280E	Deposit-I 24277742N to 2427956N & 334464E to 334808E Deposit-V 2427088N to 2427350N & 334445E to 334719E	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes, in OB and Mineral	As per proposal	Deposit I Top Soil-Nil OB-6 Mineral-8 Deposit V Top Soil-Nil OB-3 Mineral-7
2c	Stripping ratio or ore to OB ratio	1:0.49	1:0.63	
2d	Quantity of topsoil generation in m3	NIL	NIL	
2e	Quantity of overburden generation in m3	490,000.000	3,68,673.000(Approx)	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	In all there are 06 pits within the lease however, Mining Operations are confined to two pit viz. I and V Quarry 3. Benches have height of 6m and width of 12m. The mine has reported production only during 2022-23.		

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Exploitation:

Sl.N	Item	Proposals	Actual work	Remarks
3a	Number of pit proposed for production	2 No.s	2 No.s	Deposit-I & V
3b	Quantity of ROM mineral production proposed	10, 00,000 MT	6, 01,000 MT	
3c	Recovery of sailable/usable mineral from ROM production	9, 25,000 MT	6, 01,000 MT	
3d	Quantity of mineral reject generation	75,000 MT	NIL	
3e	Grade of mineral rejects generation and threshold value declared.	45%Fe to below 55% Fe	NA	
3f	Quantity of sub grade mineral generation.	75,000 MT	NIL	
3g	Grade of sub grade mineral generation	45%Fe to below 55% Fe	NA	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	NIL	NIL	
3j	Provision of drilling and blasting in mineral benches	Yes, Proposed	As proposed	Deep Hole Blasting
3k	Provision of mining machineries in mineral benches	Yes	As per proposal	The ore & over burden will be excavated & transported by conventional shovel dumper combination after loosening the hard rock mass by blasting.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes, Suitable	Maintained as proposed.	Height-6m Width-10 m
3m	Total area covered under excavation/pits	122.256 ha	117.065 ha	
3n	Ore to OB ratio for the pit/mine during the year	1:0.49	1:0.63	
3o	Total area put in use under different heads at the end of year	195.296 ha	167.365 ha	
3p	Production of ROM mineral during the last five year period as applicable	2017-18- 1.03 2018-19 – 0.39 2019-20 – 0.79 2020-21 – 1.02 2021-22 – 1.00 2022-23 – 1.00	2017-18- NIL 2018-19 – NIL 2019-20 – NIL 2020-21 – NIL 2021-22 – NIL 2022-23 – 0.601	
3q	General remarks of inspecting officers on method of mining etc.	The mine was not in operation for a major plan period for want of forest clearance. The mining operations are carried out by mechanized opencast method.		

Working parameters are given below –

Bench Height	6m
Bench Width	12m
Overall Pit Slope	Below 36°

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Blank Slope Angle

75°

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Solid Waste Management - Dumping:

Sl.N	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Yes, proposed	As per proposal	
4b	Location of topsoil, OB and mineral reject dumps	OB 2427689N to 2418146N & 335386E to 335739E SUB GRADE 2427493N-2427784N & 334936E-335196E 2427801N-2427971N & 334865E-334957E 2427912N-2428075N & 335792E-335945E 2426628N-2426850N & 333559E-333801E 2426276N-2426400N & 333600E-333708E 2428369N-2428424N & 335695E-335768E 2426300N-2426520N	OB 2428074N to 2427713N & 335688E to 335426E SUB GRADE 2427493N-2427784N & 334936E-335196E 2427801N-2427971N & 334865E-334957E 2427912N-2428075N & 335792E-335945E 2426628N-2426850N & 333559E-333801E 2426276N-2426400N & 333600E-333708E 2428369N-2428424N & 335695E-335768E 2426300N-2426520N	
4c	Number of dumps within lease area and outside of lease area	1(within lease)	1(within lease)	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL	Outside UPL	
4e	Number of active and alive dumps.	1	1	
4f	Number of dead dumps	Nil	Nil	
4g	Number of dumps established.	Nil	Nil	Active
4h	Whether Retaining wall or garland drain all along dumps are there.	Proposed	Not done	
4i	Length of Retaining wall or garland drain all along dumps	Retaining Wall- 780 Mtr. Garland Drain- 810 mtr	Retaining Wall- 0m Garland Drain- 0	
4j	Number of settling ponds	3	2	
4k	Specific comments of inspecting officer on waste dump management	Violation of Rule 11(1) has been issued to the lessee on 10/05/2023 for not constructing the protective measures along the dump thereby securing it.		

Solid Waste Management - Backfilling:

Sl.N	Item	Proposals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Nil	Nil	
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)	Nil	Nil	
5d	Total area fully reclaimed and rehabilitated	Nil	Nil	

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5e	General remarks of inspecting officers on backfilling and reclamation etc.	The area is not matured for backfilling hence no such proposal given.
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Progressive Mine Clousre Plan:

Sl.N	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	As per rule. Before 1 st July of every year.	Under process of submission	
6b	Area available for rehabilitation (ha).	NIL	NIL	NIL
6c	afforestation done (ha).	Green Belt Plantation over safety zone . Area-1.15 ha	Plantation Done in safety zone Area-1.68 ha	Green Belt Plantataion.
6d	No. of saplings planted during the year	1400 No.s	1400 No.s	
6e	Cumulative no .of plants	-	14966	
6f	Any other method of rehabilitation	NIL	NIL	
6g	Cost incurred on watch and care during the year	-	NIL	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	NIL	NIL	NIL
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NIL	NIL	NIL
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	NIL	NIL	NIL
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NIL	NIL	NIL
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NIL	NIL	NIL
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	NIL	NIL	NIL
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	NIL	NIL	NIL
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	NIL	NIL	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental Monitoring to be carried out in core & buffer zone.	Environmental Monitoring is being carried out in core & buffer zone as per the Proposal.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Environmental Monitoring is being carried out in core & buffer zone as per the Proposal.		

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Mineral Conservation:

Sl.N	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	10,00,000 MT	6,01,000 MT	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanised	Mechanised	
7c	Different grade of mineral sorted out at mines.	CLO(10-40 mm)- +62 % Fe ,Fines(minus 10 mm)- 55% to 58 % Fe & 60 % fe to 62 % fe .	CLO(10-40 mm)- +62 % Fe ,Fines(minus 10 mm)- 55% to 58 % Fe & 60 % fe to 62 % fe .	
7d	Any beneficiation process at mines	NIL	NIL	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			

Environment:

Sl.N	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	NIL	NIL	
8b	Concurrent use or storage of topsoil	NIL	NIL	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Yes	Maintained as per Proposal	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	NIL	NIL	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	NIL	NIL	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Green Belt Plantation over safety zone . Area-1.15 ha No. of Sapling- 1400 No.s	Plantation Done in safety zone Area-1.68 ha No. of Sapling- 1920 No.s	
8g	Survival rate	70	90	
8h	Water sprinkling on roads to control airborne dust	Water Sprinkling to be done on haul roads	3 No. of Water tanker is being used for water sprinkling in the haul roads.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	The lessee is regularly monitoring the air, water and other parameters. Adequate plantation has been done and for dust suppression regular water sprinkling is being done. Due to these efforts there is no adverse impact on the aesthetic beauty in and around the mines.		

Compliance of Rule 45:

S.N.	Item	COMMENTS	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly returns are Being submitted within stipulated time. Annual return for FY 22-23 is in process of submission.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager, Mining Engineer and Geologist appointed.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Annual return for FY 22-23 is in process of submission.	.
9d	Scrutiny of Annual return on afforestation	NA	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	No mineral rejects	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Annual return for FY 22-23 is in process of submission.	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Annual return for the year 2022-23 is in process of submission.	
9i	Scrutiny of Annual return on fixed assets	Annual return for the year 2022-23 is in process of submission.	
9k	Scrutiny of Annual return on mining machineries	Annual return for the year 2022-23 is in process of submission.	

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

4 The mine was not in operation for major part of the plan period and hence no previous violations exist. During this inspection it was observed that the (i) All surface features have not shown on the surface plan hence violation of Rule 31(4) of MCDR 2017 has been pointed out on 10/05/2023 alongwith violation of Rule 11(1) for not constructing the Garland drain, Retaining Wall and check dam as per proposal in approved mining plan.

11. During the year 2021-22 the Star rating validated is 4 star. Star Rating validation for the year 2022-23 is yet to be submitted by the lessee.

12. The drone data submitted by the lessee during 21-22 was examined and it was found that the lessee has worked within the lease area. Drone data for 2022-2023 is under process of submission.

(विक्रम देशपांडे)
सहायक खान नियंत्रक