

MCDR INSPECTION Format

General

SL. No.	Particulars	Details
1	File No	MCDR-MiFLOFE/8/2022-BBS-IBM_RO_BBS
2	Name of Inspecting Officer	Vikram Deshpande, Assistant Controller of Mines
3	Date of Inspection	10/01/2025
4	Name of the Mine	Khandbandh Iron Ore Mine
5	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total lease area-366.311Ha Forest Area-345.189 Ha Non-ForestArea-21.122Ha
6	Minecode	30ORI08036
7	IBM Registration Number under rule 45 of MCDR, 2017	IBM/4269/2011
8	Name of the lessee, Address, phone, email and fax number	M/s.The Odisha Mining Corporation Ltd. A Govt. Of Orissa Undertaking, OMC House, Unit-5, Post Box No. 34, Bhubaneswar info@odishamining.inmd@odishamining.in 0674-2393431,0674-2391629
9	Village	Khandbandh
10	Taluka/Mandal	Barbil
11	District	Keonjhar
12	Pincode	758034
13	State	Odisha
14	Post office	Khandbandh
15	Nearest police station	Bamebari
16	Nearest Railway station	Jaroli
17	Date of Grant of Mining Lease	30/11/1963
18	Date of Execution	30/11/1963
19	Date of opening of Mine	30/11/1963
20	Date of expiry	29/11/2033
21	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Sri. Sudhanshu Mohan Samal, IAS, MD M/s. The Orissa Mining Corporation Ltd. A Govt. Of Orissa Undertaking, OMC House, Unit-5, Post Box No. 34, Bhubaneswar
22	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Sri. Abanikanta Pradhan (Agent cum Regional Manager), Odisha Mining Corporation Limited, Regional Office, Barbil.
23	Name of the Mines Manager with Address, mobile no, email, fax number and date of appointment in mine	Sri Sanjib Kumar Pradhan, At/Po- Khandbandh, Ps Bamebari, Via- Joda, Dist- Keonjhar, Pin-758034 Email: manager.khandabandh@gmail.com,
24	Name of the Mining Engineer , Qualification and total experience with Address, mobile no, email, fax/phone number and date of appointment in mine	Sri. Sanjib Kumar Pradhan, B. Tech in mining Engineering 15 years' experience. At/Po- Khandabandh, Ps- Bamebari, Via- Joda, Dist Keonjhar, Pin- 758034. Email: manager.khandabandh@gmail.com, Date of Appointment in mine:28/03/2024
25	Name of the Geologist , Qualification and total experience with Address, mobile no, email, fax number and date of appointment in mine	Mr. Panchanan Sahoo, 7 years' experience MSc,(Geology), At/Po-Khandbandh Ps- Bamebari, Via- Joda, Dist- Keonjhar, Pin- 758034
26	Date of Approval of Mining Plan/Review of Mining Plan/ their modifications 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.
27	Mineral(s) granted in lease and proved for mining	Iron Ore
28	Method of Mining(Open cast, Underground)	Open cast
29	Category (Fully Mechanised, Others or Manual)	Fully Mechanized

30	Captive/Non Captive	Non-Captive
31	Present EC Capacity	1MTPA, EC grant date 15/12/2008.

Exploration:---

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
1a	Backlog of previous year	None	None	
1b	Exploration over lease area for Geological axis 1 or 2.	None	None	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NA	NA	
1d	Balance area to be explored to bring Geological axis in 1 or 2	NIL	NIL	
1e	Balance reserves as on 01.04.2024	As per approved mining plan dated 01/04/2023 the reserves are: 111-20.431MT 121-00 122-00	Reserves as on 01/04/2024 are: 111-19.910800MT 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.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
2a	Location of development w.r.t. lease area	Deposit-I 2427375N to 2427894N & 334729E to 334963E Deposit-V 2427179N to 2427446N & 334288E to 334597E Deposit-II 2428304N to 2428552N & 335154E to 335500E	Deposit-I 2427539N to 2427894N & 334730E to 334947E Deposit-V 2427179N to 2427362N & 334439 to 334584E Deposit-II 2428366N to 2428507N & 335187 to 335473E	
2b	Separate benches in topsoil, overburden and mineral	Separate benches in overburden and mineral proposed	Separate benches in overburden and mineral made	<u>Deposit-I</u> OB- 06 ORE-02 <u>Deposit-V</u> OB- 02 ORE-02 <u>Deposit-II</u> OB- 01 ORE-NIL <u>Deposit-III</u> NIL(Not working) <u>Deposit-VI</u> NIL(Not working)
2c	Stripping ratio or ore to OB ratio	1:0.64	1:0.74	No Significant Change
2d	Quantity of topsoil generation in m3	5000	4710	All utilized
2e	Quantity of overburden generation in m3	856660.00	414493.8050	
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.		

Exploitation:-

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
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3a	Number of pits proposed for production	5 Nos (Deposit-I ,II,III,V & VI)	3 Nos (Deposit-I , V & II)	Violation of Rule 11(1) of MCDR 2017 has been pointed out to the lessee.
3b	Quantity of ROM mineral production proposed	10, 00,000 MT	5,20,200 MT	
3c	Recovery of salable/usable mineral from ROM production	965115.00MT	5,20,200 MT	
3d	Quantity of mineral reject generation	Not Proposed	Nil	
3e	Grade of mineral reject generation and threshold value declared	NA	NA	Threshold 45%Fe to below 55%Fe
3f	Quantity of sub grade mineral generation	34885.00	128700.00	
3g	Grade of sub-grade mineral generation	45%Fe to below 55%Fe	52.49% Fe	
3h	Manual / Mechanized method adopted for segregating from ROM	Mechanized method proposed for segregating from ROM	Mechanized method carried out for segregating from ROM	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No analysis or beneficiation study proposed	No analysis or beneficiation study carried out	
3j	Provision of drilling & blasting in mineral benches	Drilling and Blasting proposed in Mineral Benches	Drilling and Blasting carried out in Mineral Benches	Deep Hole Blasting Drill dia-115 mm with cartridge NONEL and E.D Technology
3k	Provision of mining machineries in mineral benches	Use of HEMM proposed in Mineral Benches	HEMM deployed in Mineral Benches	The ore & over burden will be excavated & transported by conventional excavator 2.5 cum, dumper – 30 MT 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	Height-6m Width-12m	Height-6m Width-12m	
3m	Total area covered under excavation/pits	128.67ha	122.575ha	
3n	Ore to OB ratio for the pit/mine during the year	1:0.64	1:0.79	
3o	Total area put in use under different heads at the end of year		Area under mining 122.575 Waste disposal-11.32 Infrastructure/ road 37.899 Mineral storage 24.00	
3p	Production of ROM mineral during last five-years period, as applicable	2018-19 –0.39 2019-20 –0.79 2020-21 –1.02 2021-22 –1.00 2022-23 –1.00 2023-24 – 1.00	2018-19– NIL 2019-20– NIL 2020-21– NIL 2021-22– NIL 2022-23– 0.6010 2023-24 – 0.5202	
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 with shovel dumper combination.		

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 dumping of OB & mineral reject proposed	Separate dumping of OB & mineral reject carried out	
4b	Location of topsoil, OB & mineral reject dumps	OB 21565282N to 21565736N & 85243140E to 85243689E MINERAL REJECT 21:56:38.39N		

		21:56:50.12N & 85:24:05.91E 85:24:14.84E 21:56:48.51N 21:56:54.07 N & 85:24:03.36E 85:24:06.47 E 21:56:40.18N 21:56:49.06N & 85:24:02.44E 85:24:06.475E 21:56:52.44N 21:56:57.78N & 85:24:35.62E 85:24:40.86E 21:56:09.93N 21:56:17.23N & 21:55:58.50 E 21:56:02.57E 85:23:19.79 N 85:23:23.51N & 85:23:19.79E 85:23:23.51 E 21:57:07.26 N 21:57:09.07N & 85:24:32.04E 85:24:34.5 7E		
4c	Number of dumps within lease area and outside lease area	1(within lease)	1(within lease)	OB DUMP NO. 01
4d	Location of dumps w.r.t. ultimate pit limit	Outside UPL	Outside UPL	
4e	Number of active & alive dumps	01	01	WD-1
4f	Number of dead dumps	Nil	Nil	
4g	Number of dumps stabilised	Nil	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there	Proposed	Done as proposed	
4i	Length of Retaining wall or garland drain all along dump	Retaining Wall- 570 Mtr. Garland Drain- 570 Mtr.	Retaining Wall 570 Mtr. Garland Drain- 570 Mtr	
4j	Number of settling ponds	Not proposed	Not proposed	
4k	Specific comments of inspecting officer on waste dump management	The waste dump management is carried out as per proposal.		

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	Not proposed	Not proposed	
5b	Area under backfilling of mined out area	Not proposed	Not proposed	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area	Not proposed	Not proposed	
5d	Total area fully reclaimed & rehabilitated	Not proposed	Not proposed	
5e	General remarks of inspecting officers on backfilling and reclamation etc.	The area is not matured for backfilling hence no such proposal given.		

Progressive Mine Closure Plan:-

SL.N.	Item	Proposals (FY 2023-24)	Actual work	Remarks
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6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2). (Hard copy same provided)		PMCP report submitted	
6b	Management of worked/mined out benches 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	ii) Green Belt Plantation over Safety zone. Area-0.68 ha iii) NIL	ii) Green Belt Plantation over Safety zone. Area- 2.78 ha ii) NIL	ii) Green Belt Plantation. ii) NIL
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/taillings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	Not proposed	Not proposed	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	Not proposed	Not proposed	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Environmental Monitoring proposed in core & Buffer zone.	Environmental Monitoring is being carried out in core & Buffer zone as per the Proposal.	Carried out by third agency- M/s Center for envotech and management consultancy Pvt. Ltd.
6f	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	The PMCP activities and Environmental Monitoring is being carried out in core & buffer zone is carried out as proposed.		

Mineral Conservation:-

SL.No.	Item	Proposals ((FY 2023-24)	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	1000000.00 MT	459999.090 MT	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanized method of grade-wise mineral sorting proposed	Mechanized method of grade-wise mineral sorting carried out	
7c	Different grade of mineral sorted out at mines	CLO(10-40mm)- +62% Fe, Fines(minus10mm)- 55% to 58 % Fe & 60 %Fe to 62% Fe.	CLO(10-40mm)- +62% Fe, Fines(minus10mm)- 55% to 58 %Fe & 60 %Fe to 62%Fe .	
7d	Any beneficiation process at mines	No beneficiation process at mines proposed	No beneficiation process at mines carried out	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No beneficiation process except sorting is carried out in the mines		

Environment:-

SL.No.	Item	Proposals ((FY 2023-24)	Actual work	Remarks
8a	Separate removal and utilization of topsoil	5000	4710	Utilized for plantation
8b	Concurrent use or storage of topsoil	Utilization for plantation	Utilized for plantation	
8c	Separate dumps for overburden, waste rock, rejects and fines		Maintain as per proposal	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not proposed	Not proposed	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not proposed	Not done	
8f	Baseline information on existence of plantation & additional plantation done	Green Belt Plantation over safety zone. Area 0.68ha No. of Sapling 1000 Nos	Plantation Done in safety zone Area-2.78 ha No. of Sapling- 4448 Nos	
8g	Survival rate	70 %	98.8%	
8h	Water sprinkling on roads to control airborne dust	Water Sprinkling proposed on haul roads	Water Sprinkling carried out on haul roads	2 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

SL.No.	Item	COMMENTS		Remarks.
9a	Status of submission of Monthly and Annual returns	M.R. Submitted up to March 2024 A.R. submitted up to 2023-24		
S.N.	Item	Details GIVEN in A.R.	Actual in field	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Manager- Sri. Sanjib Kumar Pradhan Mining Engg.-Sri. Sanjib Kumar Pradhan Geologist- Sri Panchanana Sahoo	Manager- Sri. Sanjib Kumar Pradhan Mining Engg.-Sri. Sanjib Kumar Pradhan Geologist- Sri Panchanana Sahoo	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under mining 122.575 Waste disposal-11.32 Infrastructure/ road 37.899 Mineral storage 24.00	Appears to be correct	
9d	Scrutiny of Annual return on afforestation	4448 nos. of trees planted	Appears to be correct	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	128700.00 in MT of 52.49%Fe	Appears to be correct	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM stock- 0 Ore stock 459468.6 MT	Appears to be correct	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex. Mine price Fines(51-55%)- 2342 Fines(55-58%)- 3582.01 Fines(*60-62%)- 4114.25 CLO(62-65%)- 7049.34 CLO(+65%)- 8094.08 Production Cost 4180.27	Appears to be correct	
9i	Scrutiny of Annual return on fixed assets	Rs/-706610448	Appears to be correct	
9k	Scrutiny of Annual return on mining machineries	1. Backhoe-6 2. Wheel Loader-02 3. Dumper-20 4. Dozer-01 5. Drill-01 6. Water Tanker-02	Observed to be correct	
