

MCDR INSPECTION FORMAT

General

1) Name of Inspecting officer:	Shri Rajesh Kumar Das	
2) Designation	Deputy Controller of Mines	
3) Accompanying mine official with designation	Shri Praveen Kumar Mahanta (Mines Manager), Shri Binay Kumar Ranjit (Geologist)	
4) Date of Inspection	10/01/2025	
SL. No.	Particulars	Details
1	Name of the Mine	Unchabali (Mahaparbat) Iron Ore Mines
2	Total Lease Area (Ha) with breakup of non-forest and forest land	68.00 Ha (All forest land)
3	Mine code	30ORI08087
4	IBM Registration Number under rule 45 of MCDR, 2017	IBM/4269/2011
5	Name of the lessee, Address, phone, email and fax number	Odisha Mining Corporation, A Govt. Of Orissa Undertaking OMC House, Unit -5, Post Box no. -34, Bhubaneswar Planningcellomc@gmail.com , 8598968100
6	Village	Unchabali
7	Taluka/Mandal	Barbil
8	District	Keonjhar
9	Pin code	758034
10	State	Odisha
11	Post office	Bamebari
12	Nearest police station	Unchabali
13	Nearest Railway station	Nayagargh, Jaroli
14	Date of Grant of Mining Lease	09/06/2008
15	Date of Execution	09/06/2008
16	Date of opening of Mine	16/05/2022
17	Date of expiry	08/06/2058
18	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Sri Sudhansu Mohan Samal, IAS, Managing Director The Odisha Mining Corporation Ltd., OMC House, PB No-34, Bhubaneswar-751001 Email-md@odishamining.in
19	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri Abanikanta Pradhan, Regional Manager, OMC Ltd, Barbil At/Po-Barbil, 758035 Mob No-9437431943 Email-apradhan@odishamining.in D.O.A-02.06.2021
20	Name of the Mines Manager with	Sri Praveen Kumar Mahanta

	Address, mobile no, email, fax number and date of appointment in mine	Unchabali Iron Ore Mines At-Unchabali, Po-Bamebari, Dist-Keonjhar, Pin-758086, Mob No-9437654957 Email Id-praveen.mohanta@odishamining.in Date of Appointment-07.10.2021
21	Name of the Mining Engineer , Qualification and total experience with Address, mobile no, email, fax/phone number and date of appointment in mine	Sri Nirmal Kumar Munda Unchabali Iron Ore Minres At-Unchabali PO-Bamebari, Dist-Keonjhar, 758086, Email Id-nirmal.munda@odishamining.in Qualification: - B.Tech in Mining Engineering D.O.A-16.05.2022
22	Name of the Geologist , Qualification and total experience with Address, mobile no, email, fax number and date of appointment in mine	Shri Binay Kumar Ranjit Unchabali Iron Ore Minres At-Unchabali PO-Bamebari, Dist-Keonjhar, 758086, Qualification: - M.Sc. Geology D.O.A-09.12.2022
23	Date of Approval of Mining Plan/Review of Mining Plan/ their modifications with five-year period and specific condition in approval letter, if any.	No.BBS/KJR/IRON/2183/RMP/2022-23 DT.09.01.2023. Year-2023-24 to 2027-28 MS/FM/34ORI/BHU/201718, DT: 27/12/2017; Year: 01/04/2018 - 31/03/2023 MS/FM/13ORI/BHU/201415, DT: 13/02/2015, Year: 01/04/2013 - 31/03/2018 MPM/OTFM/14ORI/BHU/201112, DT: 10/02/2012, Year : 01/04/2012- 31/03/2013; MP/MAN/40ORI/BHU/200708, 31/01/2008; Year : 01/04/2008 - 31/03/2013; BBS/KJ/Fe /MP102 ; Dt: 20/06/2001; Year: 01/04/2008 - 31/03/2013
24	Mineral (s) granted in lease and proved for mining	Iron Ore
25	Method of Mining (Opencast, Underground)	Opencast
26	Category (Fully Mechanised, Others or Manual)	Fully Mechanized
27	Captive/Non-Captive	Non-Captive
28	Present EC Capacity	1Million Tonne

Exploration: ---

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
1a	Backlog of previous year	NIL	Nil	
1b	Exploration over lease area for Geological axis 1 or 2.	Nil	Nil	

1c	Exploration Agency & Expenditure in lakh Rupees during the year	NIL	Nil	
1d	Balance area to be explored to bring Geological axis in 1 or 2	NIL	Nil	
1e	Balance reserves as on 01.04.2024		5655997	
1f	General remarks of inspecting officer on geology, exploration etc.	Iron ore deposit of lease is a stratified bedded type deposit of irregular nature. The deposit exhibits good quality ore, considered to be highly potential. The prominent iron ore deposits of the lease hold are confined to Banded Iron Formation (BIF). The deposits are usually Hematitic and associated with Banded Hematite Jasper (BHJ). The ore is localized at the top of the hills and ridges whereas, the valley portion is covered with ferruginous shale. The prominent flat topped mound contains re-cemented insitu ore in the Western Block. The second folds are accompanied by a well-developed axial plane striking N60 E - S60W with a 22 to 48 dip due North-West. Two parallel ore bodies are found to occur both in the Eastern and western flank of the deposit trending NE-SW with North-Westerly dip. The mineralized area in ML broadly explored in G1.		

Development: --

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
2a	Location of development w.r.t. lease area	QUARRY-1 (336774E TO 336956E & 2420695N TO 2420984N and 600mRL to 570mRL), Quarry 2 & QUARRY-3 (337178E TO 337459E & 2420406N TO 2421013N and 600mRL to 558mRL)	QUARRY-1 (336774E TO 336956E & 2420695N TO 2420984N and 600mRL to 582mRL) QUARRY-3 (337178E TO 337459E & 2420406N TO 2421013N and 600mRL to 558mRL) In Quarry 2 no work done.	
2b	Separate benches in topsoil, overburden and mineral	Pit 1 : Ob: 4, Ore : 5, TS: 0, Pit 2: OB: 1, Ore: 2, TS: 1; Pit-3 : OB : 6, Ore: 7 , TS: 0	Pit 1 : OB, Ore : 1, TS: 0 Pit 2: Nil; Pit-3 : OB : 6, Ore: 7 , TS: 0	
2c	Stripping ratio or ore to OB ratio	0.51 m3/T	0.22 m3/T	
2d	Quantity of topsoil generation in m3	2029 m3	1706 m3	

2e	Quantity of overburden generation in m3	519233.00 m3	220215.460 m3	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	The development is less w.r.t. proposal. The development was broadly within proposed area.		

Exploitation: --

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
3a	Number of pits proposed for production	Quarry 1, Quarry 2 and Quarry 3	Quarry 3 & 1	
3b	Quantity of ROM mineral production proposed	10,00,000 Tonnes	999997 Tonnes	
3c	Recovery of salable/usable mineral from ROM production	<u>0.92</u>	<u>100%</u>	
3d	Quantity of mineral reject generation	<u>78883</u>	54400	
3e	Grade of mineral reject generation and threshold value declared	<u>45%<Fe<55%</u>	<u>45%<Fe<55%</u>	
3f	Quantity of sub-grade mineral generation	<u>78883</u>	54400	
3g	Grade of sub-grade mineral generation	<u>45%<Fe<55%</u>	<u>45%<Fe<55%</u>	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechansied	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Chemical analysis of grade	Chemical analysis of grade	
3j	Provision of drilling & blasting in mineral benches	Yes, D&B is proposed for mineral benches	Yes, D&B has been done for mineral benches.	
3k	Provision of mining machineries in mineral benches	Shovel and dumper combination	Shovel and dumper combination.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Ore - Height : 6 m , Width : 10 m; OB-height : 6 m , Width 10 m	Ore - Height : 6 m , Width : 10 m; OB – Height : 6m, width 10 m	
3m	Total area covered under excavation/pits	20.53 ha	11.39 Ha	
3n	Ore to OB ratio for the pit/ mine during the year	1.9259 t/m3	4.54 T/m3	
3o	Total area put in use under different heads at the end of year	Area under Mining : 20.53; Top soil stacking: 0.73; OB: 7.08, Mineral Storage : 4.15, Infrastructure: 2.79 , Roads : 3.05, Mineral Separation –	Area under Mining : 11.39; Top soil stacking: 0.15; OB: 5.18, Mineral Storage : 4.14, Infrastructure: 1.05 , Roads : 2.65,	

		1.45 Total: 39.78	Mineral Separation – 1.13. Total: 25.69 Ha	
3p	Production of ROM mineral during last five-years period , as applicable	2019-20=0.9862857Mt 2020-21=0.9746826Mt 2021-22=1.0219425Mt 2022-23=0.99675Mt 2023-24=1000000.00Mt	0.00 0.00 0.00 995600.00 999997.00	
3q	General remarks of inspecting officer on method of mining etc.	The method of mining is by opencast method by using HEMM and deep hole drilling and blasting. The mining activity by fully mechanized method with shovel and 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)	<u>Top soil, OB as marked in RMP</u>	<u>Top soil, OB stacked as marked in RMP</u>	
4b	Location of topsoil, OB & mineral reject dumps	<u>TOP SOIL</u> 336883.677E TO 336948.891E & 2420989.313N TO 2421023.851N <u>Dump:</u> 336668.4260 E- 337044.242E & 2420488.266N TO 2421012N	<u>TOP SOIL</u> 336883.677E TO 336948.891E & 2420989.313N TO 2421023.851N_ <u>Dump:</u> 336686.81E TO 336816.198E & 2420525.311N TO 2420618.2N	
4c	Number of dumps within lease area and outside lease area	Within lease area 1 Dump proposed	Within the lease area 2 dumps are present. For the previous mining plan 1 temporary dump was proposed which was to be used in backfilling of quarry 1. As Quarry 1 was not exhausted completely, the backfilling was not completed. Moreover, the new dump proposed as per RMP was utilized for FY 23-24	

4d	Location of dumps w.r.t. ultimate pit limit	336668.426E TO 337044.242E AND 2420488.266N TO 2421012.235N	336686.81 E TO 336816.198 E AND 2420525.311 N TO 2420618.2 N	
4e	Number of active & alive dumps	<u>Active dump -1</u>	<u>Active dump -1</u>	
4f	Number of dead dumps	<u>0</u>	<u>0</u>	
4g	Number of dumps stabilised	<u>0</u>	<u>0</u>	
4h	Whether Retaining wall or garland drain all along dumps are there	RW and GW as per Proposal	Yes	
4i	Length of Retaining wall or garland drain all along dump	RW: 200 m, GD: 200 m	RW: 0 m, GD: 0 m	
4j	Number of settling ponds	0	0	
4k	Specific comments of inspecting officer on waste dump management	The dumping was not done as per proposal in 2023-24. The dumping was proposed through backfilling in Quarry 1 in 3.56 ha. Area but actually no backfilling done. There was proposal of Retaining wall and garland drain all around dump of 200 meter each in 2023-24 but actually no garland drain and retaining wall done.		

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	Quarry 1 extraction and backfilling	Quarry 1 was not exhausted completely.	
5b	Area under backfilling of mined out area	3.56 m2	0	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area	2029 m3 utilisation	126 m3 utilised in green belt development.	
5d	Total area fully reclaimed & rehabilitated	3.56 Ha	0	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Backfilling not done.		

Progressive Mine Closure Plan:---

SL.N.	Item	Proposals (FY 2023-24)	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on	By 30 th June	Submitted on 28 th June 2024	

	time and correctly - Rule 26(2). (Hard copy same provided)			
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	3.56 Ha 2.2568 Ha 903 903 Nos. Nil 193182	0 Ha 2.257 Ha 3732 Nos (2016-2024) 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	3.56 m2 * 30 106.8 m3 0 0 Nil	0 0 m3 0 0 Nil	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	0 0.000356 Ha Terracing	0 0 Nil	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	As per standards laid by SPCB and CPCB	Achieved as per SPCB and CPCB.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	There was proposal of Retaining wall and garland drain all around dump of 200 meter each in 2023-24 but actually no garland drain and retaining wall done.		

Mineral Conservation: ---

SL.No.	Item	Proposals ((FY 2023-24)	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	1000000MT	1262074MT	Grade wise dispatch
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Mechanical	
7c	Different grade of mineral sorted out at mines	Fines (0-10 mm) = +55% Fe ; CLO 10-40 mm = +55% Fe	Fines (-10mm) ,60-62% & 62-65% CLO (10-40mm) 58-60% & 62 – 65%Fe	
7d	Any beneficiation process at mines	NA	NA	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	The blending of low grade with high grade done to get the desire grade.		

Environment: --

SL.No.	Item	Proposals ((FY 2023-24)	Actual work	Remarks
8a	Separate removal and utilization of topsoil	2029 m3	1706 m3 of topsoil was generated and 126 m3 used in green belt development area	
8b	Concurrent use or storage of topsoil	2029 m3	126 m3 of topsoil utilised in green belt development.	
8c	Separate dumps for overburden, waste rock, rejects and fines	<u>TOP SOIL</u> 336883.677E TO 336948.891E & 2420989.313N TO 2421023.851N Dump: 336668.426E TO 337044.242E AND 2420488.266N TO 2421012.235N	<u>TOP SOIL</u> 336883.677E TO 336948.891E & 2420989.313N TO 2421023.851N Dump: 336686.81 E TO 336816.198 E AND 2420525.311 N TO 2420618.2 N	
8d	Use of overburden, waste rock, rejects and fines dump for restoring the land to its original use	Land restoration proposed as per backfilling in 3.56 m2	Backfilling was not yet done due to late working permission from DFO for the FY 23-24	

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Nil	Nil	
8f	Baseline information on existence of plantation & additional plantation done	903	1132	
8g	Survival rate	85 %	98%	
8h	Water sprinkling on roads to control airborne dust	Mobile water sprinkler	Mobile water sprinkler, Fixed water sprinkler	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	During mine visit no adverse impact on aesthetic beauty within lease observed.		

Compliance of Rule 45

SL.No.	Item	COMMENTS		Remarks.
9a	Status of submission of Monthly and Annual returns	M.R. Submitted upto Dec'24 A.R. submitted upto 28/06/24		
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: Shri Praveen Kumar Mahanta Mining Engineer: Shri Nirmal Kumar Munda Geologist: Shri Binay Kumar Ranjit		
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under mining 11.39 ha, waste disposal 5.18 ha., Infrastructure & road 4.83 ha.		
9d	Scrutiny of Annual return on afforestation	1132 nos		
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Nil		
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Yes given.		
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Cost of production-Rs 1600/-, Ex-mine price: for various grade of fines &		

		CLO is different.		
9i	Scrutiny of Annual return on fixed assets	Rs 412385678/-		
9k	Scrutiny of Annual return on mining machineries	Yes given		

During present mine inspection Rule 11(1) of MCDR,2017 was found violated.
