INDIAN BUREAU OF MINES MINERALS DEVELOPMEMT AND REGULATION DIVISION MCDR INSPECTION REPORT BHUBANESWAR REGIONAL OFFICE

General:

SL. No.	Particulars	Details
1	Name of the Mine	Roida-C Iron & Manganese Mine
2	Date of inspection	26-04-2024
3	Name of inspecting officer	Prashant S Hegde, RMG
4	Name accompanying mine officials	S/Shri Pradip Kumar Sahoo, QP & Sr. Manager (Mining), Uday Sankar Pattanaik, Mines Manager, Biswa Prakash Sahu, Mining Engineer, Zeeshan Ahmad, Geologist and other mine officials.
5	Last date of Inspection & Officer	02/05/2023 Shri Sanjay Kumar Mahapatra, then AME
6	Total Lease Area (Ha) with breakup of Non-forest and forest land	192.81 Ha (Entire area within reserve forest)
7	Minecode	30ORI08066
8	IBM Registration Number under rule 45 of MCDR, 2017	IBM/4269/2011
9	Name of the lessee, Address, phone, email and fax number	M/s Odisha Mining Corporation Ltd. A Govt. of Odisha Undertaking OMC House, Unit-5, Post Box No34, Bhubaneswar Phone No-06742392778 Email: info@odishamining.in Fax No-06742396889
10	Village	Kolha –Roida
11	Taluka/Mandal	Bhadrasahi
12	District	Keonjhar
13	Pincode	Pin-758036
14	State	Odisha
15	Post office	Barbil
16	Nearest police station	Rugudih
17	Nearest Railway station	Barbil
18	Date of Grant of Mining Lease	08-02-1977
19	Date of Execution	30-12-1985
20	Date of opening of Mine	10.04.1996
21	Date of expiry	07.02.2027
22	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri Balwant Singh, IAS, Managing Director & Nominated Owner of M/s Odisha Mining Corporation Limited OMC HOUSE, POST BOX NO-34, BHUBANESWAR, ODISHA-751001 PH:06742377401, E-Mail: md@odishamining.in D.O.A-16/06/2021
23	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri Abanikanta Pradhan, At-Kolha-Roida, Po-Bhadrasahi, Via-Barbil, Mob no-9437431943 Email-apradhan@odishamining.in

		DoA: 30.09.2022
24	Name of the Mines Manager with Address, mobile no, email, fax number and date of appointment in mine	Shri Uday Sankar Pattanaik B.E. with 1 st class Mines Manager, Exp.17 yrs. At-Kolha-Roida, Po-Bhadrasahi, Via-Barbil, Ph No:9437888304, Mail id- manageromcroidac@gmail.com DoA: 01.10.2022
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 Biswa Prakash Sahu, B.Tech (Mining), Exp. 15 yrs. Address: Matkambeda,758036,Keonjhar,Odisha Ph No: 9438117866 Mail id: idcmining@gmail.com DOA: 31.10.2021,
26	Name of the Geologist , Qualification and total experience with Address, mobile no, email, fax number and date of appointment in mine	Shri Zeeshan Ahmad Intg M.Sc.(Applied Geology) Exp. 08 yrs. Mail id: zeeshan.ahmad@odishamining.in Mob: 9167849834 DOA: 20.10.2022
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.	Approved Review of Mining Plan Letter No. RPM/A/25-ORI/BHU/2021-22 dtd. 23.11.2021 for period from 2022-23 to 2026-27 upto 7/2/27. (No. 2133)
28	Mineral (s) granted in lease and proved for mining	Iron ore & Mn-ore (Mining of Iron ore proposals only)
29	Method of Mining(Opencast, Underground)	Opencast
30	Category (Fully Mechanised, Others or Manual)	Fully Mechanized
31	Captive/Non Captive	Non-Captive
32	Present EC Capacity	0.46 MTPA (Iron ore) + 0.007 MTPA (Mn- ore)

OBSERVATIONS/COMMENTS OF INSPECTING OFFICER:

1)Exploration:---

SL.No	Item	Proposals	Actual work	Remarks
•		(FY 2023-24)		
1a	Backlog of previous year	FY 22-23: 9 Nos	FY 22-23: 55	All proposed 115
		of core BHs:	Nos of core	nos BHs were
		FY 23-24: 106	BHs with 4688	drilled.
		Nos of core BHs	total meterge;	
		(100mX 100M	FY 23-24: 60	
		grid to end of	nos core BHs	
		mineralization)	with 3019 total	
		,	meterge	
			(100mX 100M	
			grid to end of	
			mineralization)	
1b	Exploration over lease area	Conversion of	G-1: 40.72 Ha;	Potentially
	for Geological axis 1 or 2.	entire area under	Proved Non-	mineralized area
	_	G-1	Mineralized	explored in G-1

			area area (under-G-1, G2/ G-3) : 152.09 Ha	level
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NA	M/s Maheswari Mining Pvt. Ltd. Expenditure during the year Apx. 170 Lakhs	NIL
1d	Balance area to be explored to bring Geological axis in 1 or 2	NA	NIL; Potentially mineralized area already explored in G-1 level.	
1e	Balance reserves as on 01.04.2024	NA	Iron Ore (+45 % Fe) reserves (121): 3.823 million tonnes; Mn-Ore(+10% Mn) (122) 39,546 tonnes	Based on approved RMP dated 23.11.2021.
1f:	General remarks of inspecting Officer on Geology, exploration etc.	limb of the Hor known as S belt/series/formati follows: Laterite, Mn-ore, BHQ/BH configuration of o Iron ore: 640m X Mn-ore: 200mX 6	ccupies the western se-shoe shaped sy inghbhum-Bonai-K on. The litho-units Iron ore, Chert & U, Shale. Based on re body as follows. 610m X 47m (Avg 0m X 30m (10 to 4)	s observed at ML as Cherty Quartzite with a exploration data, the 59 % Fe)

2)Development:--

SL.	Item	Proposals (FY 2023-24)	Actual work	Remarks
No.	Item	110000000 (1 1 2020 2 1)	retair work	Remarks
2a	Location of developme nt w.r.t. lease area	2437268N-2437385N 334395E-334850E (Main pit & Crusher pit)	2437277N-2437775N 334559E-334927E (Main pit only due to backlog of previous year)	Draft Modified RMP submitted on 21/03/2024 & under process.
2b	Separate benches in topsoil, overburden and mineral	Separate benches in overburden and minerals; No top-soil generation;	As per proposals	
2c	Stripping	1:0.45	1:0.95	Ratio in

	ratio or ore to OB ratio		Due to backlog of development handlings. Draft Modified RMP submitted on 21/03/2024 & under process.	tonnes/m3 BD:2.2;
2d	Quantity of topsoil generation in m3	No proposals	Nil	
2e	Quantity of overburden generation in m3	206,830	399,496	Due to backlog of previous FY.
2f	General remarks of inspecting Officer on developme nt of pit w.r.t. type of deposit etc	backlog of previous year. Subs	ation OB generation has been occurred attention of the sequently, draft Modified RMP suggested at western part	ubmitted on

3)Exploitation:--

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
3a	Number of pits proposed for production	Two nos of Pits (Main Pit &Crusher Pit)	Single pit (Main pit only due to backlog of previous year)	Modified RMP submitted on 21/03/2024& under process.
3b	Quantity of ROM mineral production proposed	459,990 tonnes	421,650 tonnes	Within the limit.
3c	Recovery of salable/usab le mineral from ROM production	328,890 Tonnes 71 %	369,800 Tonnes (+58% Fe) 87 % including blended quantity.	Due to blending of 88,847 tonnes of <58 % Fe ore
3d	Quantity of mineral reject generation	131,100 Tonnes (45 to 58 % Fe)	Total of 139,097 Tonnes (45 to 58 % Fe)	As reported by the lessee, 88,847 tonnes of MR utilized by blended with high grade ore & 50,250 tonnes stocked.

3e	Grade of mineral reject generation and threshold	MR: 45 to 58 % Fe	MR: 45 to 58 % Fe	Threshold value of Iron Ore: +45 % Fe
	value declared			
3f	Quantity of sub-grade mineral generation	Same as para 3d	I	As reported utilization of Sub-grade mineral /
3g	Grade of sub-grade mineral generation	Same as para 3e		mineral reject during FY- 2023-24 is 88,847 tonnes
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	
3i	Any analysis or beneficiatio n study proposed & carried out for sub- grade mineral and reject	Nil	NIL	
3j	Provision of drilling & blasting in mineral benches	Deep hole drilling & blasting with 100 mm dia. of holes. Drilling Pattern: Burden 2.0-2.5m & spacing 2.5-3m; Drill holes will be in single row as well as multi rows on staggered pattern	As per proposals.	NIL
3k	Provision of mining machineries in mineral benches	Yes, mining by Excavators & Dumpers Combination.	As per proposals.	
31	Whether height of benches in overburden and mineral suitable for method of	9m bench height with 15 m width.	As per proposals except western part of main pit due to collapse/side-down of benches and no operation at that site. Slope Stability Study of Mine Pit was carried out by	Modified RMP submitted on 21/03/2024 & was under process.

	mining proposed in MP/SOM				DEPARTMENT MINING ENGINEERING NATIONAL OF TECHN ROURKELA, 2023 and implements.	NG, INSTITUTE IOLOGY , on Nov	
3m	Total area covered under excavation/ pits	31.13	6 Ha.		29.51	На.	
3n	Ore to OB ratio for the pit/mine during the year	1:0.45			1:0.95 Due to l development Draft Modi submitted on & was under p	21/03/2024	Ratio in tonnes/m3 BD:2.2;
30	Total area put in use under	Particulars	Total Area(Ha) at the end of Plan period		Particulars	Total Area(Ha) at the end of FY 2023-24	NIL
	different heads at the	Area under Mining	31.136		Area under Mining	29.51	
	end of year	Overburden/ Waste dumping	28.85		Overburden/ Waste dumping	25.19	
		Mineral Storage	7.447		Mineral Storage	7.45	
		Area Occupied Infrastructure, plants, buildings, roads etc	8.45		Area Occupied Infrastructure, plants, buildings, roads etc	8.32	
		Others	7.138		Others	6.78	
	D 1 :	2010 20 172	000	\downarrow	Within the lim		***
3p	Production of ROM	2019-20 :459, 2020-21 : 459			2019-20 :309, 2020-21 :232,		Unit: In tonnes;
	mineral	2021-22: 459,			2021-22: 429,		
	during last	2022-23: 459,			2022-23: 145,		Iron ore only.
	five-years period, as applicable	2023-24: 459,	UEE,		2023-24: 421,	UCO	
3q	**	arks of inspection	ng Officer on		method is be RMP. Draft 1		per approved submitted on

4)Solid Waste Management-Dumping:--

SL.No	Item	Proposals (FY 2023-24)	Actual work	Remarks

4a	Separate dumping of topsoil, OB & mineral reject	No Top soil Generation; Separate stacking/dumping Mineral reject and OB.	Broadly as per the proposals.	NIL
4b	Location of topsoil, OB & mineral reject dumps	Top Soil- NIL Mineral Reject:-708- 855N/ 612-686W OB:-Disposal of OB wastes by backfilling at exhausted part of main pit.	As per the proposals except OB disposal by backfilling. Backfilling was not carried out due to backlog of previous FY & ore/mineral not exhausted completely at proposed location. and OB disposals at OB Dump-3 2438032N-24378353N 334230E-334582E OB Dump-8 2437745N-2438051N 334547E-334800E OB Dump-6 2438197N-2438383N 334625E-334955E Draft Modified RMP submitted on 21/03/2024 with backfilling proposals from 2024-25 onwards. & was under process.	NIL
4c	Number of dumps within lease area and outside lease area	Within lease-7 Nos Out-side lease-NIL	Within lease-7 Nos Out- side lease-NIL	NIL.
4d	Location of dumps w.r.t. ultimate pit limit	Proposed Out-side UPL	As per the proposals.	NIL.
4e	Number of active & alive dumps	3 nos	3 nos	NIL
4f	Number of dead dumps	4 nos	4 nos	NIL

4g	Number of dumps stabilished	No such proposals	4 nos so far	
4h	Whether Retaining wall or garland drain all along dumps are there	Yes; Retaining wall or garland drain all along dump	Constructed Retaining wall or garland drains all along dumps	
4i	Length of Retaining wall or garland drain all along dump	No such proposals during FY 2023-24.	Retaining wall: Cum. of 5293 m so far. Garland drain: Cum. of 3542 m so far.	NIL.
4j	Number of settling ponds	NIL	NIL	7 nos so far.
4k	Specific comments of inspecting Officer on waste dump managemen t	ore/mineral not exhausted o	ed out due to backlog of previously of the proposed location. Supposed location of the completely at proposed location. Suppose the complete of the complete o	ıbsequently,

5)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	3.3 Ha area mined out	NIL	
5b	Area under backfilling of mined out area	2.298 Ha	NIL; due to backlog of previous FY & ore/mineral not exhausted completely at proposed location.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area	NIL	NIL	
5d	Total area fully reclaimed & rehabilitated	NIL	NIL	
5e	General remarks of inspecting Officer on backfilling and reclamation	previous FY & o	not carried out due ore/mineral not exhaust n. Subsequently, draft	ed completely at

	etc	submitted	on	21/03/2024	with	backfilling	proposals
		from 2024-	-25 d	onwards. & w	as un	der process.	

6)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)	Before 1 st July 2024	Not due for submission at time of inspection.	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	i)Nil ii) 2 Ha iii) 5000 nos iv) NA v)Plantation vi) NA	i) Nil ii) 4.963 Ha. iii) 7941 nos. (at dumps slope) iv) 1,60,119 nos. (Within lease area) v) Plantation vi) Rs. 106.8 lakhs (As reported)	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	i) 2.298 Ha ii) 2.298 Ha iii)NIL iv)NIL v)NIL	i)NIL; Backfilling was not carried out due to backlog of previous FY & ore/mineral not exhausted completely at proposed location. iii)NIL iv)NIL	Subsequently, draft Modified RMP submitted on 21/03/2024 with backfilling proposals from 2024-25 onwards. & was under process.
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation	i)NIL ii)Nil	i)NIL ii)Nil	NIL
	ii) Area rehabilitated (ha)	iii)Nil	iii)Nil	

	iii) Method of rehabilitation			
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Environmental monitoring in Core zone and buffer zone will be as per MOEF &CC and SPCB guidelines.	Environmental monitoring in Core zone and buffer zone was carried out as per the proposals and parameters are within the limit.	NIL
6f	General remarks of inspecting Officer on PMCP compliance & progressive closure operation etc	backfilling propose was not carried our mineral not exhau Subsequently, dr	lementing PMCP pitals, as per approved R t due to backlog of prested completely at preste Modified RMP backfilling proposals ader process.	MP. Backfilling vious FY & ore/oposed location. submitted on

7)Mineral Conservation:---

SL.No	Item	Proposals (FY 2023-24)	Actual work	Remark
				S
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting to Fines & CLO by crushing and screening within lease area.	As per proposals	NIL
7b	Method of grade-wise mineral sorting i.e. manual or mechanica l	Mechanical	Mechanical	NIL
7c	Different grade of mineral sorted out at mines	Iron Ore of different size (Fines & CLO) and Grade wise sorting and dispatched (Fine Iron Grade range- below 58 % Fe and above 58 % Fe) and CLO (5-18 mm &10-40 mm size)	As per proposals (Fines Iron Grade range: 51 to 55 % Fe and 55 to 58 % Fe and 58-60% Fe) and CLO: below 62 % Fe(any size), 62 to 65 % Fe (5-18 mm and 10-40 mm size)	NIL
7d	Any beneficiation process at mines	None Except dry crushing & screening	As per proposals.	NIL
7e	General remarks of inspecting Officer on mineral conservation & beneficiation issues	Grade-wise soring to fines/CLO & dispatches of ore/mineral as per the proposals and there is no mineral conservation issue.		

8)Environment:--

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
8a	Separate removal and utilization of topsoil	No such proposals.	Nil	

8b	Concurrent use or storage of topsoil	No such proposals.	Nil	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines	Separate dumping of OB wastes & mineral rejects proposed	Carried out as per approved proposals.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Back-filling of 2.298 Ha at exhausted part of main pit.	NIL; Due to backlog of previous FY & ore/mineral not exhausted completely at proposed location.	Subsequently, draft Modified RMP submitted on 21/03/2024 with backfilling proposals from 2024-25 onwards. & was under process.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No such proposals	NIL	Nil
8f	Baseline information on existence of plantation & additional plantation done	Plantation of 5000 Nos of saplings	7941 nos saplings planted within ML during year 23-24 with cumulative 1,60,119 nos of saplings.	As reported.
8g	Survival rate	70	85 %	As reported.
8h	Water sprinkling on roads to control airborne dust	Regular sprinkling of water on Haul roads, crushing & screening plant site and dump location etc using Water tanker to suppress the dust.	Carried out as per the proposals.	
8i	General remarks of inspecting Officer on aesthetic beauty in & around mines area.		n & around mines area i e PMCP proposal ar ne proposals.	_

9)Compliance of Rule 45

SL.No.	Item	COMMENTS	
			Remarks.
9a	Status of submission	Regularly submitting the MRs/ARs on-time.	Nil

	of Monthly and Annual returns	Submission of AR 2023-24 was inspection and scrutiny of AR made.	
S.N.	Item	Details GIVEN in A.R. FY-2022-23	Actual in field
9Ъ	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manager: Shri Uday Sankar Pattanaik Mining Engineer: Shri Biswa Prakash Sahu Geologist: Shri Zeeshan Ahmad	Actual also the same.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	 Covered under current (O/C) Workings- 26.984Ha Used for Waste Disposal- 25.084 Ha Occupied by plant, buildings, residential, welfare, buildings and roads- 6.95 Ha Other Purpose (including Mineral Storage)- 16.085 Ha 	Actual also as per AR-2022-23.
9d	Scrutiny of Annual return on afforestation	5000 nos (WML)	Actual also as per AR 2022-23.
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	During year-22-23 (Generated) Iron Unprocessed Ore (45-58 % Fe) Iron Processed Ore (45-58% Fe) 33,749 tonnes	Actual also as per AR .
9f	Scrutiny of Annual return on ROM stock and/or graded ore	As on 31.03.2023 tonnes Stock Iron ROM: 2559 tonnes Lumps closing stock in tonnes 62%- below 65 % Fe 65%Fe and above 49 Fines closing stock in tonnes 45%- below 51 % Fe 20,834 51%- below 55%Fe 72,962 55%- below 58%Fe 1,37,562 58%- below 40,755	Appear to be correct at that time.
		60%Fe 40,755 60%Fe 41 62% 41 CLO stock in tonnes Below 62% 18,574	

				1 1	1
		Fe (any size)			
		65% Fe (5- 18 mm)	3,969		
		62%- below 65% Fe (10- 40 mm)	44		
9g	Scrutiny of Annual	Cost of production	on: Rs-2515.7	Appear to be	
	return on sale value,	per tonne;		correct.	
	Ex. Mine price &	Ex-mine price:		1	
	production cost	Ex-mine Price			
		Fines in Rs	per tonne		
		58%- below 60% Fe	2780.58		
		Ex-mine Price	ce for CLO		
		in Rs per	r tonne		
		below 62% Fe (any size)	7653.43		
		62%-65% Fe (5-18 mm Size)	7379.91		
9i	Scrutiny of Annual return on fixed assets	Fixed Value of <i>A</i> 2,28,13,637	Assets: Rs	Appear to be correct.	
9k	Scrutiny of Annual return on mining machineries	Back Hoe: 5 nos Wheel Loader:1 Dumpers: 10 nos Rock Drill (100 Water tanker: 2n Crusher: 1 nos;	nos; s; mm): 1nos;	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 02/05/23, the violation of rules 11(1),12(1) and 12(4) of MCDR 2017 were pointed out and subsequently, said rule complied on 03/07/23.
- (b)During current inspection: No serious violations observed during current inspection.
- (11) On-line validation of star rating of templates submitted under rule 35 (FY-2022-23) has been made on 22/12/23 for Three star at RO level.
- (12)The lessee was submitted DAI/drone survey data under rule 34A for FY 22-23 on 13/06/23. The submission of DAI/drone survey data i.r.o. FY 2023-24 was not due at time of inspection.

Date: 15/05/2024

(Prashant S. Hegde) Regional Mining Geologist