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

#### General:

SL. No.	Particulars	Details
1	Name of the Mine	Guali Iron Ore Mine
2	Date of inspection	07/02/2024
3	Name of inspecting officer	Prashant S Hegde, RMG
4	Name accompanying mine officials	S/Shri Abanikanta Pradhan, Agent, Pradip Kumar Sahoo, Sr. Manager (Mining), Subrat Kumar Behera Sr. Manager (Geology), Pankaj Kumar Mahanta Mines Manager, Chandan Kumar Samal, Mining Engineer, Radhashyam Sahoo, Geologist and other mine officials
5	Last date of Inspection & Officer	23/11/2022 Shri Sanjib Kumar Mohapatra, SMG
6	Total Lease Area (Ha) with breakup of Non-forest and forest land	358.258 Ha. as per DGPS (229.524 Ha Forest + 128.734 Ha Non-forest)
7	Minecode	30ORI08126
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	Topadihi
11	Taluka/Mandal	Barbil
12	District	Keonjhar
13	Pincode	758035
14	State	Odisha
15	Post office	Guali
16	Nearest police station	Rugudi
17	Nearest Railway station	Barbil
18	Date of Grant of Mining Lease	12/01/2021 (Earlier the mine was put under auction by the state Government and the successful bidder could not comply the terms & conditions. Thereafter, Odisha state Government granted ML for 10 years period to M/s OMC as the block has been reserved under section 17A(2) of MMDR Act by Central Government)
19	Date of Execution	12/01/2021
20	Date of opening of Mine	12/01/2021
21	Date of expiry	11/01/2031
22	Name of the <b>Nominated Owner</b> 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,

23	Name of the <b>Mine Agent</b> with Address, phone, email, fax number and date of appointment	ODISHA-751001 PH:06742377401, E-Mail: md@odishamining.in D.O.A-08.01.2021 Shri Abanikanta Pradhan Regional Office,Barbil,PO-Barbil, Dist-Keonjhar-758035,Odisha
24	Name of the <b>Mines Manager</b> with Address, mobile no, email, fax number and date of appointment in mine	D.O.A-02.06.2021 Shri Pankaj Kumar Mahanta Address-Qtr. No-C/3,OMC Colony, Barbil, Odisha Phone-9981995991 <u>Email-pankaj.mahanta@odishamining.in</u> D.O.A-28/09/2022
25	Name of the <b>Mining Engineer</b> , Qualification and total experience with Address, mobile no, email, fax/phone number and date of appointment in mine	Shri Chandan Kumar Samal Qualification-B.Tech (Mining Engineering) Experience-12 Yrs. Address-Qtr. No. E-22,Omc Colony, Barbil, Odisha Phone No-6207491994 <u>Email-chandan.samal@odishamining.in</u> D.O.A-10/08/2021
26	Name of the <b>Geologist</b> , Qualification and total experience with Address, mobile no, email, fax number and date of appointment in mine	Shri Radhashyam Sahoo Qualification-MSc. In applied Geology Experience-14 Yrs. Address-Qtr.No.D-13,OMC Colony, Barbil, Odisha Phone No-8280122098 Email-radheshyam.sahoo@odishamining.in D.O.A-10/02/2021
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 Mining Plan Letter No. MP/A/38-ORI/BHU/2020-21dated 19/03/2021 for period 2020-21 to 2024-25.
28	Mineral (s) granted in lease and proved for mining	Iron ore
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	12 MTPA ( As per EC J-11015/1155/2007-IA.II(M) dated 17/07/2023 with specific condition that further expansion of 20 MTPA will be considered only after achieving the production of 12 MTPA and based on satisfactory compliance of EC condition)

### OBSERVATIONS/COMMENTS OF INSPECTING OFFICER:

#### 1)Exploration:---

SL.No	Item	Proposals (FY 2022-23)	Actual work	Remarks
1a	Backlog of previous year	FY 21-22: 81 Nos of core BHs; FY 22-23: 82 Nos of core BHs; FY 23-24: 52 Nos of core BHs; (100mX 100M grid with each 100 m depth)	FY 21-22: 81 Nos of core BHs with 8340 total meterage; FY 22-23: 46 Nos of core BHs with 4605 total meterage; FY 23-24: 71 Nos of core BHs with 7100 total meterage so far.	V/L issued for deviation in exploration.
1b	Exploration over lease area for Geological axis 1 or 2.	Conversion of entire area under G-1	G-1: 160.449 Ha; G-2: 171.707 Ha; Proved Non- Mineralized area area: 26.102 Ha (As reported.)	NIL
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NA	Maheswari Mining Pvt Ltd, Raniganj. WB; Rs 245.67 lakhs expenditure during FY: 22- 23 as reported.	NIL
1d	Balance area to be explored to bring Geological axis in 1 or 2	NA	26.65 Ha area to be explored for G-1 reported.	
1e	Balance reserves as on 01.04.2023	NA	Iron Ore (+45 % Fe) reserves (121+122) : 148.37 million tonnes	Based on approved MP dated 19/3/2021.
1f:	General remarks of inspecting Officer on Geology, exploration etc.	Singhbhum-Bonai The deposit forms litho-unit observe iron ore, Iron ore	-Keonjhar iron ore a northerly plungi d at ML as follow (HLO, SLO & b	r Horse-shoe shaped belt/series/formation. ng synclinorium. The ws: Laterite, Lateritic due dust), BHJ/BHQ. eviation for FY-2022-

## 2)Development:--

	velopment:			·
SL. No.	Item	Proposals (FY 2022-23)	Actual work	Remarks
2a	Location of developme nt w.r.t. lease area	<b>Topodihi Quarry Block-A</b> (N-2432699 to N-2433646 & E-325374 to E-326010): <b>Baliasahi Quarry Block-B</b> (N-2432661 to N-2433145 & E-323779 to E-324485)	<b>Topodihi Quarry Block-A</b> (N-243700 to N-2433600 & E- 325440 to E-326025) <b>Baliasahi Quarry Block-B:</b> NIL	Violation pointed out for deviation.
2b	Separate benches in topsoil, overburden and mineral	Separate benches in overburden and minerals ; No top-soil generation;	As per proposals	
2c	Stripping ratio or ore to OB ratio	1:0.032	1:0.104	Ratio in tonnes/m3 BD:2; Violation pointed for deviation
2d	Quantity of topsoil generation in m3	No proposals	Nil	
2e	Quantity of overburden generation in m3	9,60,000 m3	5,96,205 m3	Violation pointed for deviation as compare to production achieved.
2f	General remarks of inspecting Officer on developme nt of pit w.r.t. type of deposit etc	limit as per approved MP. The ratio / ore to OB ratio as well	arry Block-A is being carried ou e violation pointed for deviation as deviation in OB generation as elopment at Baliasahi Quarry Blo	it within the in Stripping compare to

# 3)Exploitation:--

SL.No.	Item	Proposals	Actual work	Remarks
		(FY 2022-23)		
3a	Number of	Two pits.	One pit.	Violation
	pits	(Topodihi Quarry Block-A	(Topodihi Quarry Block-A	pointed out for
	proposed	and Baliasahi Quarry	only)	deviation.
	for	Block-B)		
	production			

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3b	Quantity of ROM mineral production proposed	30,000,000 Tonnes	5,699,979 Tonnes Within the prevailing EC limit. (Thereafter EC No. J- 11015/1155/2007-IA.II(M) dated 17/07/2023 with specific condition that further expansion of 20 MTPA will be considered only after achieving the production of 12 MTPA and based on satisfactory compliance of EC condition)	NIL
3с	Recovery of salable/usab le mineral from ROM production	86 % (25,760,000 Tonnes)	81 % (4,594,089 Tonnes)	As per prevailing EC limit.
3d	Quantity of mineral reject generation	4,240,000 Tonnes	1,105,890 Tonnes	As per prevailing EC limit.
Зе	Grade of mineral reject generation and threshold value declared	MR: 45 to 55 % Fe	MR: 45 to 55 % Fe	Threshold value of Iron Ore : +45 % Fe
3f	Quantity of sub-grade mineral generation	Same as para 3d		Sub-grade mineral / mineral reject are being
Зg	Grade of sub-grade mineral generation	Same as para 3e		blended with HG to produce desire grade of material based on market demand.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	
3i	Any analysis or beneficiatio n study proposed & carried out	Nil	NIL	

	for sub- grade mineral and reject					
3j	Provision of drilling & blasting in mineral benches	Deep hole dril of 150mm-16		Deep hole dri of 150mm dia		For Hard rocks only.
3k	Provision of mining machineries in mineral benches	Yes, mining by Excavators & Dumpers Combination.		As per propos	als.	
31	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	15m bench he m width.	ight with 30	As per propos	als.	
3m	Total area covered under excavation/ pits	115.96 (End of Pla		60.903 Ha		Production achievement as per EC limit.
3n	Ore to OB ratio for the pit/mine during the year	1:0.	032	1:0.	104	Ratio in tonnes/m3 BD:2;Violatio n pointed for deviation.
30	Total area put in use under different	Particulars	Total Area(Ha) at the end of Plan period	Particulars	Total Area(Ha) at the end of FY 2022-23	Production achievement as per EC limit.
	heads at the end of year	Area under Mining	115.961	Area under Mining	60.903	
	end of year	Overburden/ Waste dumping	21.532	Overburden/ Waste dumping	10.919	
		Mineral Storage	66.388	Mineral Storage	31.48	
		Area Occupied Infrastructure, plants, buildings , roads etc	44.16	Area Occupied Infrastructure, plants, buildings , roads etc	36.074	
Зр	Production of ROM mineral during last five-years	2020-21: <b>0.48</b> 2021-22: <b>5.7</b> 2022-23: <b>30</b> 2023-24: <b>30</b> (Unit: In Milli		2020-21: <b>0.36</b> 2021-22: <b>5.7</b> 2022-23: <b>5.69</b> 2023-24: <b>5.78</b> 2024)	9	Unit: In Million tonnes; Date of opening of

	period, as applicable			mine on 12/1/2021
3q	General rema method of mi	arks of inspecting Officer on ning etc	Open-cast fully mechan method is being carried as MP. It was proposed to ore/mineral of 9 MTPA thr 21 MTPA through pipeline slurry at approved MP. commissioning of slurry pip system was under process achievement is as per prevai	per approved transport the ough road and in the form of The proposed peline transport Production

## 4)Solid Waste Management-Dumping:--

SL.No	Item	Proposals (FY 2022-23)	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject	No Top soil Generation; Separate stacking/dumping Mineral reject; OB Dumping proposed at new waste dump-A at North western side ML (N- 2433410 to 2433728 & E- 323200 to 323660) and also road maintenance work.	No top soil: No mineral reject stacking/dumping as utilized by blended with HG; Temporary dump yard inside Topodihi Quarry-Block –A (N- 2432860 to 2432680 & E-325440 to 325700) and also road maintenance work.	Violation pointed out for deviation in OB dumping location.
4b	Location of topsoil, OB & mineral reject dumps	Top Soil- NIL OB dump- N-2433410 to 2433728 & E-323200 to 323660; Mineral reject dumping/stacking: MR dump-D-1-topodihi ( N 2433282 to 2433515 & E-324482 to 324800) MR dump-D-2-Baliasahi (N 2433263 to 2433362 & E323553 to 323800)	Top Soil- NIL OB dump- Temporary dump yard inside Quarry-A.( N- 2432860 to 2432680 & E- 325440 to 325700 MR dump-No stacking as all the mineral rejects generated are blended with HG to produce desired grade	Violation pointed out for deviation in OB dumping location.
4c	Number of dumps within lease area and outside lease area	Within lease-3 Nos Out side lease-NIL	Within lease-3 Nos Out- side lease-NIL	Including Two nos of old dumps pertain to ex-lessee.
4d	Location of dumps w.r.t. ultimate pit limit	Proposed Out-side ML (N- 2433410 to 2433728 & E- 323200 to 323660)	Temporary dumping carried out inside Quarry-A( N-2432860 to 2432680, E-325440 to 325700)	Violation pointed out.

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4e	Number of active & alive dumps	One active dump only.	One temp. dumping at Quarry block-A and one active dump active dumping at NW part of ML started during current year	Violation pointed out.
4f	Number of dead dumps	2	2	Old dumps pertain to ex-lessee.
4g	Number of dumps stabilished	NIL	NIL	
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 dump were well maintained.	
4i	Length of Retaining wall or garland drain all along dump	Retaining wall: 1345 m Garland drain :1345 m	Retaining wall: 3000 m Garland drain :1300 m (along Toe of dumps & stocks)	
4j	Number of settling ponds	6 Nos	6 nos	
4k	Specific comments of inspecting Officer on waste dump managemen t	Overburden wastes management is not being carried out as per the approved proposals. Violation pointed out for deviation in OB dumping location & during current year (YF-23-24) dumping at new waste dump-A of North western side ML is being carried out in advancing manner instead proposed retreating manner. Further, re-handling of Temp. WD No-2 of exlessee not yet started due to less excavation & advancement of pit.		

## 5)Solid Waste Management-Backfilling:--

SL.No	Item	Proposals (FY 2022-23)	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	No such proposals.	NIL	
5b	Area under backfilling of mined out area	NA	NIL	
5c	Concurrent use of topsoil for	NA	NIL	

	restoration or rehabilitation of mined out area				
5d	Total area fully reclaimed & rehabilitated	NA	NIL		
5e	General remarks of inspecting Officer on backfilling and reclamation etc	Existing pits were not matured by backfilling as ore/mineral not exhausted. However, temporary dump are being carried out inside Topodihi Quarry-Block–A due to delay in forest clearance of proposed location and violation pointed out.			

## 6)Progressive Mine Closure Plan:---

SL.N.	Item	Proposals (FY 2022-23)	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2). (Hard copy same provided)	Before 1 <sup>st</sup> July 2023	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	i)Nil ii) 0.97 Ha iii) 2425 iv) 4175 v)Plantation vi) NA	i)Nil ii)1.92Ha iii)3002 nos iv) 4762 nos v) Plantation vi) 54.8 lakhs	3002 nos saplings planted over Gap Filling of boundary safety zone during FY 22- 23.
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)NIL ii) NIL iii)NIL iv)NIL v)NIL	i)NIL ii) NIL iii)NIL iv)NIL v)NIL	No such reclamation and rehabilitation by backfilling proposals.
6d	Compliance of			

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	Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated	i)NIL ii)Nil	i)NIL ii)Nil	NIL	
	(ha) iii) Method of rehabilitation	iii)Nil	iii)Nil		
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	Lessee has implementing PMCP proposals as per approved MP.			

## 7)Mineral Conservation:---

SL.No	Item	Proposals ((FY 2022-23)	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	<b>Iron Ore</b> of different size (Fines & CLO) and Grade wise sorting and dispatched (Fine Iron Grade range- 55 to 65% Fe) and CLO (5-18 mm &10-40 mm size)	As per proposals (Fine Iron Grade range- 60-below 62% Fe & 62- below 65% Fe) and CLO 62 to 65 % Fe (5-18 mm &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. Sub-grade mineral/ mineral reject are being blended with HG to produce desire grade of material based on market demand. The proposed commissioning of slurry pipeline transport system was under process		

## 8)Environment:--

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SL.No.	Item	Proposals (FY 2022-23)	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.	Violation pointed out for site deviation of OB waste dumping.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposals	NIL	Nil	
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 2425 Nos of saplings proposed.	3002 nos saplings planted in 1.92 Ha area during year 22- 23 with cumulative 4762 nos of saplings.		
8g	Survival rate	NA	87 %		
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.	Aesthetic beauty in & around mines area is good as lessee implementing the PMCP proposal and carried out plantation as per the 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		

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S.N.	Item	Details GIVEN in A.R.		Actual in field	
9Ъ	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manager: Shri Pankaj Kumar Mahanta Mining Engineer: Shri Chandan Kumar Samal. Geologist: Shri Radhashyam Sahoo		Actual also the same.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	<ol> <li>Covered under current (O/C) Workings- 60.903 Ha</li> <li>Used for Waste Disposal- 10.919 Ha</li> <li>Occupied by plant, buildings, residential, welfare, buildings and roads- 36.074 Ha</li> <li>Other Purpose (including Mineral Storage)- 31.48 Ha</li> </ol>		Actual also as per AR.	
9d	Scrutiny of Annual return on afforestation	3002 nos		Actual also as per AR	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)		Generated) 105,890 connes NIL	Actual also as per AR and being utilized by blending as per Market demand.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	As on 31.03.2023 tonnes Stock Iron ROM: NIL Fines closing stock in tonnes		Appear to be correct.	
		51%- below 55 % Fe	NIL		
		55%- below 58%Fe	NIL		
		58%- below 60%Fe	NIL		
		60% bolow	,91,557		
		620/ balary	70,065		
		65%Fo and	3,450		
		CLO stock in to	onnes		
		62%- below 65% Fe (5- 2, 18 mm)	82,200		
		62%- below	27,797		
9g	Scrutiny of Annual	Cost of production: I	Rs-2551.26	Ex-mine	Violation

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	return on sale value,	per tonne;		calculation was not	pointed
	Ex. Mine price &	Ex-mine price:		matching with	out.
	production cost	Ex-mine Price of Iron ore		corresponding	
		Fines in Rs	per tonne	sales-despatches	
		60%- below 62% Fe	3993.17	value.	
		62%- below 65 %Fe	4641.75		
		Ex-mine Prie	ce for CLO		
		in Rs pe	r tonne		
		62%-65%			
		Fe (5-18	7222.92		
		mm Size)			
		62%-65%			
		Fe (10-40	6510.08		
		mm Size)			
9i	Scrutiny of Annual	Fixed Value of A	Assets: Rs	Appear to be	
	return on fixed	55,63,02,389		correct.	
	assets				
9k	Scrutiny of Annual	Back Hoe: 13 no	,	Observed to be	
	return on mining	Wheel Loader:7	,	correct.	
	machineries		Dumpers 38 nos ;		
		Rock Drill (150 mm): 1 nos; Water tanker: 5 nos; Crusher: 1nos; Pumps: 1 nos; Dozer: 3 nos Motor Grader: 2 nos.			

(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 23/11/22, the violation of rule 11(1) of MCDR 2017 was pointed out and subsequently, said rule complied on 20/8/23.

(b)During current inspection: The violation of Rules 11(1) and 45(7) of MCDR 2017 have been observed and the violation letter issued on 21/4/2024.

(11) On-line validation of star rating of templates submitted under rule 35 (FY-2022-23) has been made on 22/04/2024 for Three star at RO level.

(12)The lessee was submitted DAI/drone survey data under rule 34A for FY 22-23 on 20/06/2023.

Date: 22/02/2024

(Prashant S. Hegde) Regional Mining Geologist