

## MCDR INSPECTION Format

## General

SL. No.	Particulars	Details
1	Name of the Mine	Raikela Iron Ore Mines of M/s Geetarani Mohanty
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total Lease area: - 67.586 Ha. Forest area: - 66.671 Ha. Non-Forest area: - 0.915 Ha.
3	Minecode	30ORI13034
4	IBM Registration Number under rule 45 of MCDR, 2017	IBM/5796/2011
5	Name of the lessee, Address, phone, email and fax number	M/s Geetarani Mohanty Shri Shrinibash Sahoo (Managing Partner) Station Road,Barbil Dist.: - Keonjhar State: - Odisha (758035) Email: Geetarani.mines@gmail.com
6	Village	Raikela
7	Taluka/Mandal	Koira
8	District	Sundargarh
9	Pincode	770048
10	State	Odisha
11	Post office	Koira
12	Nearest police station	Koira
13	Nearest Railway station	Barsuan
14	Date of Grant of Mining Lease	02/07/1991
15	Date of Execution	02/07/1991
16	Date of opening of Mine	13/01/1993
17	Date of expiry	01/07/2041
18	Name of the <b>Nominated Owner</b> with Address, phone, email, fax number and date of appointment	Shri Shrinibash Sahoo House No – 96, Station Road, Barbil – 758035, Dist–Keonjhar (Odisha) Phone No: - 9437003288 Email: - geetarani.mines@gmail.com Date of Appointment: - 09/01/1992
19	Name of the <b>Mine Agent</b> with Address, phone, email, fax number and date of appointment	Shri Sunit Patel House No – 96, Station Road, Barbil – 758035, Dist–Keonjhar (Odisha)

		Phone No: - 7008806558 Email: - geetarani.mines@gmail.com Date of Appointment: - 01.09/2021
20	Name of the <b>Mines Manager</b> with Address, mobile no, email, fax number and date of appointment in mine	Shri Pramod Kumar Sahoo Raikela Iron Ore Mine of M/s Geetarani Mohanty Village: - Raikela, Po: - Tensa, Dist.: - Sundargarh State: - Odisha (770048) Email: - <a href="mailto:geetarani.mines@gamil.com">geetarani.mines@gamil.com</a> Date of Appointment: - 01.06.2019
21	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	<b>Shri Susila Kumar Pradhan</b> Qualification: - BE (Mining) Experience: - 20 years Phone: - 9438458072 Email: - <a href="mailto:geetarani.mines@gamil.com">geetarani.mines@gamil.com</a> Date of Appointment: - 24.06.2019
22	Name of the <b>Geologist</b> , Qualification and total experience with Address, mobile no, email, fax number and date of appointment in mine	Mr. Pradeept Mohapatra Qualification: M.sc Geology Experience: - 18 years Phone: - 9438149715 Email: <a href="mailto:geetarani.mines@gamil.com">geetarani.mines@gamil.com</a> Date of Appointment: - 24.10.2021
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.	Modification of Review of the Mining Plan No. IBM/5796/2011/30ORI3034 Dated: 12.07.2023 for the period from 2023-24 to 2025-26.
24	Mineral (s) granted in lease and proved for mining	Iron Ore
25	Method of Mining (Opencast, Underground)	Open Cast
26	Category (Fully Mechanized, Others or Manual)	Fully Mechanized
27	Captive/Non Captive	Non-Captive
28	Present EC Capacity	4.99

**Exploration: ---**

SL. No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
1a	Backlog of previous year	8	8	
1b	Exploration over lease area for Geological axis 1 or 2.	67.586	67.586	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	MY WORLD CONSULTANT SERVICE PVT LTD	26.32	
1d	Balance area to be explored to bring Geological axis in 1	4.6310	4.6310	

	or 2			
1e	Balance reserves as on 01.04.2023	96.78 MTA		
1f	General remarks of inspecting officer on geology, exploration etc.	The Raikela Iron ore mine is a part of Bonai synclinerium. The famous "Horse Shoe" shaped synclinerium open at the north and closes at the south of Malangtoli. The superimposed folding is noticed within the synclinerium and the general strike is NNE - SSW with westerly dip. The lease area is broadly explored in G1 & G2.		

**Development: --**

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
2a	Location of development w.r.t. lease area	TOP & SOUTH	TOP & SOUTH	
2b	Separate benches in topsoil, overburden and mineral	NA	NA	
2c	Stripping ratio or ore to OB ratio	1:0.0449	1:0.0270	
2d	Quantity of topsoil generation in m <sup>3</sup>	NA	NA	
2e	Quantity of overburden generation in m <sup>3</sup>	179000	134769	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	The development was less w.r.t proposal and the south pit not developed as per proposal and accordingly violation pointed out.		

**Exploitation: --**

SL. No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
3a	Number of pits proposed for production	1	1	
3b	Quantity of ROM mineral production proposed	4990000	4983000	
3c	Recovery of salable/usable mineral from ROM production	3924055.000	3689080.699	(+55 salable ore)
3d	Quantity of mineral reject generation	1065945	1000000	Top Capping remove & development working
3e	Grade of mineral reject generation and threshold value declared	45-55	45-55	
3f	Quantity of sub-grade mineral generation			

3g	Grade of sub-grade mineral generation			
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	NA	NA	
3j	Provision of drilling & blasting in mineral benches	Deep hole Drilling & Blasting	Deep hole Drilling & Blasting	
3k	Provision of mining machineries in mineral benches	Excavator, Dumper, Screening & Crushing	Excavator, Dumper, Screening & Crushing	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Overburden =NA & in Mineral Bench height 10 m & width 10 m	Overburden =NA & in Mineral Bench height 10 m & width 10 m	
3m	Total area covered under excavation/pits	37.82	37.82	
3n	Ore to OB ratio for the pit/mine during the year	1:0.0449	1:0.0270	
3o	Total area put in use under different heads at the end of year	2.51	2.51	
3p	Production of ROM mineral during <b>last five-years period</b> , as applicable	2020-21=299000.000 2021-22=299000.000 2022-23=499000.000 2023-24=499000.000	2020-21=1214000.000 2021-22=2981000.000 2022-23=3143500.000 2023-24=4983000.000	
3q	General remarks of inspecting officer on method of mining etc.	The method of mining is opencast by using HEMM and working done broadly as per proposal.		

#### 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)	Separately	Separate dumping for OB & Mineral Reject	
4b	Location of topsoil, OB & mineral reject dumps	For Topsoil is NA & For Dump N-2419674 to 2419846, E-312252 to 312317 &	For Topsoil is NA & For Dump Broadly within proposed area	

		Mineral Reject – N-2419461, E-311694 N- 2419608 E- 312161 N-2419198 E-311923		
4c	Number of dumps within lease area and outside lease area	Only 1 within Lease area	Only 1 within Lease area	
4d	Location of dumps w.r.t. ultimate pit limit	Latitude From 21°52'16.14" to 21°52'16.14" & Longitude 85°10'58.69" to 85°10'58.69"	Latitude From 21°52'16.14" to 21°52'16.14" & Longitude 85°10'58.69" to 85°10'58.69"	
4e	Number of active & alive dumps	1	1	
4f	Number of dead dumps	0	0	
4g	Number of dumps stabilized	Nil	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there	YES	YES	
4i	Length of Retaining wall or garland drain all along dump	Retaining wall=185 meter & Garland drain= 450 meter	Retaining wall= 260 meter & Garland drain= 700 meter	
4j	Number of settling ponds	0	0	
4k	Specific comments of inspecting officer on waste dump management	Broadly as per proposal.		

#### Solid Waste Management-Backfilling: -- NA

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	NA	NA	
5b	Area under backfilling of mined out area	NA	NA	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area	NA	NA	
5d	Total area fully reclaimed & rehabilitated	NA	NA	
5e	General remarks of inspecting officer on backfilling, reclamation etc	The area not matured for backfilling.		

#### Progressive Mine Closure Plan: ---



Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly under Rule 26(2).	To be submitted on or before 1 <sup>st</sup> July,2024	Yes submitted	
6b	Area available for rehabilitation (ha).	Nil	Nil	Rehabilitation by Plantation was proposed.
6c	Afforestation done (ha).	0.257 Ha	0.50 Ha	
6d	No. of saplings planted during the year	643 Nos.	1500 Nos.	
6e	Cumulative no. of plants	Not mentioned specifically	29148 Nos	
6f	Any other method of rehabilitation	No such proposal	NA	
6g	Cost incurred on watch and care during the year	Rs 96450/-	Broadly as per proposal.	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	NA	NA	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NA	NA	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	NA	NA	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	NA	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	NA	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	643	1500 Nos	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Causality replacement	Causality replacement	
6o	Compliance of rehabilitation of waste land within lease (iii)	By plantation	By plantation	

	Method of rehabilitation			
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly Environmental monitoring at 4 locations for ambient air quality; 4 locations for water quality; Noise level survey at 4 locations	Monthly Environmental monitoring at 6 locations for ambient air quality; 6 locations for water quality; Noise level survey at 6 locations	Monitoring of Environmental parameters in Core as well as buffer zone has been carried out.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Broadly as per proposal.		

### Mineral Conservation:

SL.No.	Item	Proposals ((FY 2023-24))	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Yes	Yes	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Mechanical	
7c	Different grade of mineral sorted out at mines	+55 %Fe =3924055.000 (MT) -55 % Fe=1065945.000 (MT)	Fines(MT) -62% Fe=146600.000 -60% Fe=543000.000 -58%Fe=1375990.000 -55%Fe=1000000.000 CLO(MT) -65% Fe=104400.000 -62% Fe=435620.000 -60% Fe=725890.000 -58%Fe=619500.000	
7d	Any beneficiation process at mines	NA	NA	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	The low grade material blend with high grade for desired grade. There is no wet beneficiation within lease area and only crushing and screening done.		

### Environment: --

SL.No.	Item	Proposals ((FY 2023-24))	Actual work	Remarks
8a	Separate removal and utilization of topsoil	NA	NA	
8b	Concurrent use or storage of topsoil	NA	NA	
8c	Separate dumps for overburden, waste rock, rejects and fines	YES	YES	
8d	Use of overburden, waste			



	rock, rejects and fines dumps for restoring the land to its original use	Separately Stack	Separately Stack	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	NA	NA	
8f	Baseline information on existence of plantation & additional plantation done	Plantation Inside & outside the lease area	1500 no's inside the lease area	
8g	Survival rate	Inside 70 Outside 60	Inside 70 Outside 60	
8h	Water sprinkling on roads to control airborne dust	YES	YES	
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 with Rule 45**

SL. No.	Item	COMMENTS		Re marks.
9a	Status of submission of Monthly and Annual returns	M.R. Submitted upto ____May-24 A.R. submitted upto _____23-24		
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- Promad Kumar Sahoo Mining Engineer- Sushila Kumar Pradhan Geologist- Pradeepta Mohapatra	Manager- Promad Kumar Sahoo Mining Engineer- Sushila Kumar Pradhan Geologist- Pradeepta Mohapatra	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under pits-37.82 ha., Waste disposal-2.00 ha., Infrastructure & road-4.06 ha., Mineral storage,etc.-8.39 ha.		
9d	Scrutiny of Annual return on afforestation	1500 nos reported		
9e	Scrutiny of Annual	Generation during the year 1000000 MT with	Total	

	return on mineral reject generation (Grade & quantity)	Grade 52.5 % FE						stacked at the end of the year 310449 MT.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	160200 MT							
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Fin es Grades	Open ing stock at mine -head	Pro duc tio n	Desp atche s from mine head	Closin g stock at mine-head	Ex-mine price (₹-Tonne)		
		51 % to below 55 % Fe	6488 05.7 53	100 000 0	1338 356. 57	31044 9.096	1739.58		
		55 % to below 58 % Fe	3934 28.4 96	137 599 0.0 00	1190 077. 557	57934 0.939	2547.20		
		58 % to below 60 % Fe	1739 01.9 92	543 000 .00 0	5510 38.1 87	16586 3.805	3082.93		
		60 % to below 62 % Fe	3160 6.96 6	146 600 .00 0	1307 67.6 80	47439. 286	3513.93		
		62 % to below 65 % Fe	9733 .265	0	3903 .150	5830.1 15	3500.000		
		CL O	Open ing stock at mine-head	Produc tion	Desp atche s from mine head	Closin g stock at mine-head	Ex-mine price (₹-Tonne)		
		Below 62 % Fe (CL O any	1213 30.01 1	178101 0.000	1725 799.6 45	1765 40.36 6	4592.91		

		size )								
		62 % to below 65 % Fe( 5-18 mm size CL O)	143.830	91900.000	84850.850	7192.980	6070.77			
		62 % to below 65 % Fe( 10-40 mm size CL O)	8045.590	12500.000	2643.630	17901.960	3000.00			
9i	Scrutiny of Annual return on fixed assets	Rs 699036115/-								
9k	Scrutiny of Annual return on mining machineries	SI.No	Type	Make	Capacity (m <sup>3</sup> )	No. of Equipments				
		1	Excavator	Hitachi Zaxix 470( Existing )	3.20	3				
		2	Excavator	Volvo( Proposed)	3.00	4				
		3	Hyd. Excavator or- PC200 (for Plant Feeding)	Komatsu( Existing)	0.90	5				
		4	Hyd. Excavator or- PC200 (for Plant Feeding)	Komatsu( Proposed)	0.90	5				
		5	Wheel	SDLG	3.00	4				

			Loade r	& Liugu ng( Ex isting)			
		6	Wheel Loade r	SDLG & Liugu ng( Pr oposed )	2.50	5	
		7	Wheel Loade r	Cat( Pr oposed )	4.50	3	
		8	Dump er	Volvo( Existin g)	30.00	17	
		9	Water Tanke r	Volvo ( 2000 0 Litre, Existin g))	20000 .00	1	
		10	Water Tanke r	Volvo ( 2000 0 Litre, Proose d)	20000 .00	3	
		11	Water Tanke r	Tata 8000 Litre( Existin g)	8000. 00	1	
		12	Mobil e Crush ing Unit	Terex 200TP H( Exi sting)	200.0 0	2	
		13	Mobil e Crush ing Unit	Metso 400 TPH (Propo sed)	400.0 0	2	
		14	Mobil e Scree n Plant	Terex Power Screen 400TP H(Exis ting)	400.0 0	2	
		15	Mobil e Scree n Plant	Kleem ann 350 MT/Hr ( Exist	350.0 0	1	

				ing)				
		16	Mobil e Scree n Plant	Terex Power Screen 200M T/Hr (Existi ng)	200.0 0	1		
		17	Centr al Proce ssing Unit	Sandvi ck 500TP H(Pro posed)	500.0 0	2		
		18	Grade r	Komat su 260 HP ( Exist ing)	260.0 0	1		
		19	Grade r	Komat su 120 HP (Propo sed)	120.0 0	1		
		20	Rock Break er	Hitach i 30Mt (Existi ng)	30.00	1		
		21	Rock Break er	Hyund ai 30Mt (Propo sed)	30.00	1		

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