

MCDR INSPECTION REPORT**General**

S N	Particulars		Details
1	File no		MCDR-MiFLOCR/1/2022-BBS-IBM_RO_BBS
2	Name of Inspecting Officer		Shri. Vikram Prakash Deshpande, ACOM
3	Name of the Mine		South Kaliapni Chromite Mines
4	Total Lease Area (Ha) with breakup of Non-forest and forest land		720.727 (as per DGPS), 126.381 (Non-Forest) & 594.346 (Forest)
5	Mine code		11ORI19007
6	Date of Inspection		29.10.2024
7	Name of official accompanying inspection		Shri Gnyaneshwar Bhuyan, Mines Manager
8	IBM Registration Number under rule 45 of MCDR, 1988		IBM/4269/2011
9	Name of the lessee, Address, phone, email and fax number		M/s Odisha Mining Corporation, OMC House, Unit 5, Post Box- 34, Bhubaneswar- 751001 Ph-06742377401, planningcellomc@gmail.com
10	Village		Kaliapani
11	Taluka/Mandal		Sukinda
12	District		Jajpur
13	Pincode		755028
14	State		Odisha
15	Post office		Kaliapani
16	Nearest police station		Kaliapani
17	Nearest Railway station		Tomka
18	Date of Grant of Mining Lease		22.01.1980
19	Date of Execution		22.01.1980
20	Date of opening of Mine		08.10.1980
21	Date of first Renewal, if applicable and its period & expiry		18.01.1999 (20 yrs), 21.01.2020
22	Date of second Renewal, if applicable and its period & expiry		
23	Date of submission of renewal application if Mining Operations are continuing under deemed extension		12.08.2016 (50 yrs), 21.01.2030
24	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment		Sri Balwant Singh , OMC House, Unit V, Post Box-34, 06742377401, md@odishamining.in
25	Name of the Mine Agent with Address, phone, email, fax number and date of appointment		Sri Ashis Kumar Samantray , Regional Office, OMC Ltd, J K Road, 9937297144, aksamantray@odishamining.in, 30.09.2022
26	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines		Sri Ganeswar Bhuyan , OMC Township, Kaliapani, 9439854089, 01/10/2022
27	Name of the Mining Engineer & Geologist, Qualification and total experience	Mining engineer Qualification Date of appointment Address phone/email	Sri Santanu Kumar Aich , B Tech in Mining Engg, Exp-9 yrs, OMC Township, Kaliapani, 9483234320, santanu.aich@odishamining.in, 19.12.2022
		Geologist Qualification Date of appointment Address phone/email	Sri Debashis Nayak, M Sc. in Geology, OMC Township, Kaliapani, 7735277533, dnayak@odishamining.in, 29.04.2024
28	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.		Yes
29	Date of Approval of Review of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.		5 years Review of Mining Plan (2020-21 to 2024-25), 20.11.2029
30	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.		Modified Scheme of Mining Plan (2022-23 to 2024-25), 12.05.2022 & Modified Scheme of Mining Plan (2023-24 to 2024-25), 12.03.2024
31	Mineral(s) granted in lease and proved for mining		Chromite
32	Method of Mining(Open cast, Underground)		Open-cast
33	Category (Fully Mechanised, Others or Manual)		Fully Mechanized
34	Captive/Non Captive		Non-captive
35	Environment Clearance grant date & limit of EC		23.01.2024 & 1.4 MTPA
36	CTO		17.08.2024 & 1.4 MTPA

Exploration

S.N.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	5	5	
1b	Exploration over lease area for Geological axis 1 or 2.	37 holes	50 holes	
1c	Exploration Agency & Expenditure in	Rs. 67295702.64	Rs. 46718866	M/s OMC Ltd, M/s

	lakh Rupees during the year			GEMCO-KATI
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	
1e	Balance reserves as on 01.04.2024	NA	Balance reserves as on 01.04.2024 111-31605414 MT(>10 % Cr2O3)	As per AR for FY 2023-24
1f	General remarks of inspecting officer on geology, exploration etc.	ML is a part of chromite bearing Sukinda ultramafic complex. Regional chromite band No : Band-I,II, III & IV, are exist in this ML. Entire potentially mineralized area explored under G-1; Based on exploration, the mineralization Ore Band-I & IV has been proved upto -767mRL & -253mRL respectively.		

Development

S.N.	Item	Proposals (2023-2024)	Actual work (2023-2024)	Remarks
2a	Location of development w.r.t. lease area	Band-I 373331 - 374018E, 2327411 - 2328275N Bottom = -34 mRL Band-II 374173 - 374772E, 2327967 - 2328591N Bottom = 98 mRL Band-IV 373950 - 375044E, 2325957- 2326825N Bottom = 104 mRL	Band-I 373396 - 373996E, 2327474 - 2328268N Bottom = -15 mRL Band-II 374604 - 374772E, 2327990 - 2328525N Bottom = 107 mRL Band-IV 374004 - 375007E, 2325974N - 2326793N Bottom RL = 104 mRL	Broadly within the proposed location.
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Top-soil Band I- 0 Band II- 1 Band IV- 1 OB Band I- 32 Band II- 13 Band IV- 11 Mineral Band I- 8 Band II- 6 Band IV- 11	Top-soil Band I- 0 Band II- 0 Band IV- 1 OB Band I- 31 Band II- 8 Band IV- 11 Mineral Band I- 4 Band II- 3 Band IV- 8	As per proposals
2c	Stripping ratio or ore to OB ratio	Band-I = 1:4 Band-II = 1:6 Band-IV =1:8	Band-I = 1:9.7 Band-II = 1:7 Band-IV =1:7	Ratio in Tonnes
2d	Quantity of topsoil generation in m ³	20300	24661	
2e	Quantity of overburden/waste generation in m ³	8979700	7148666.47	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	The development is carried out broadly as per proposal. The approved review of Mining Plan for 2025-26 to 2029-2030 envisages UG Mining from 3 rd Year onwards.		

Exploitation

S.N.	Item	Proposals (2023-2024)	Actual work (2023-2024)	Remarks
3a	Number of pits proposed for production	3	3	(1)Quarry-D (for Band-I) (2)Quarry-D (for Band-II) (3)Quarry-F (for band-IV)
3b	Quantity of ROM production proposed	14,00,000 MT	9,57,778 MT	VL not issued as the production rate has been reduced in approved Review of Mining Plan
3c	Recovery of salable/usable mineral from ROM production	14,00,000 MT	9,57,778 MT	

3d	Quantity of mineral reject generation	118520 MT	766.44 MT	
3e	Grade of mineral reject generation and threshold value declared	10 to < 40 % Cr ₂ O ₃	10 to < 40 % Cr ₂ O ₃	Threshold value of Chromite: +10 % Cr ₂ O ₃ ; MR of Grade 30 to 40 % Cr ₂ O ₃ are being utilized by blending.
3f	Quantity of sub-grade mineral generation	400000 MT	208100.99 MT	
3g	Grade of sub-grade mineral generation	10 to < 40 % Cr ₂ O ₃	10 to < 40 % Cr ₂ O ₃	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised method proposed for segregating from ROM	Mechanised method adopted 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 for sub-grade mineral and reject	No analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	
3j	Provision of drilling & blasting in mineral benches	Provision of drilling & blasting in mineral benches made	Provision of drilling & blasting in mineral benches carried out.	115-150 mm diameter Drilling and controlled blasting (6.6 m Depth of drill Hole. 3.5 spacing and 3m burden)
3k	Provision of mining machineries in mineral benches	Provision of mining machineries in mineral benches proposed.	Provision of mining machineries in mineral benches made.	HEMM like dumpers, shovels etc deployed.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of benches proposed for Mining Method	Height of benches suitable for Mining method adopted	6m bench height with 11m to 15 m width and overall pit slope angle less than 30 degree.
3m	Total area covered under excavation/pits	212.963	204.33	
3n	Ore to OB ratio for the pit/mine during the year	Band-I = 1:4 Band-II = 1:6 Band-IV = 1:8	Band-I = 1:8.7 Band-II = 1:4.3 Band-IV = 1:6.7	
3o	Total area put in use under different heads at the end of year	575.903	411.03	Broadly within proposed limit
3p	Production of ROM mineral during last five-year period, as applicable			
	Year -2018-19	1391228	1050513	
	Year-2019-20	1391228	713526	
	Year-2020-21	1400000	965736	
	Year-2021-22	1000000	999991	
	Year-2022-23	1400000	1000259	
3q	General remarks of inspecting officer on method of mining etc.	Open-cast fully mechanised mining method is presently being carried out. As per the approved Review of Mining Plan for a period from 2025-26 to 2029-30 UG Mining is proposed from 3 rd Year Onwards.		

Solid Waste Management-Dumping

S.N.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Separate dumping of topsoil, OB & mineral reject proposed	Separate dumping of topsoil, OB & mineral reject carried out as proposed	
4b	Location of topsoil, OB & mineral reject dumps	OB 373556 – 375400E 2326427 - 2328510N Min. Rejects 375167E to 376123E 2326343N to 2327037N	OB 373558 – 375375E 2326875 - 2328504N Min. Rejects 375167E to 376123E 2326343N to 2327037N	Dump WD-2 could not be made due to FC delay hence no violation issued.
4c	Number of dumps within lease area and outside lease area	2	1	

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	373556 – 375400E 2326427 - 2328510N Top RL- 272 mRL	373558 – 375375E 2326875 - 2328504N Top RL- 272 mRL	
4e	Number of active & alive dumps	2	1	
4f	Number of dead dumps	NIL	NIL	
4g	Number of dumps stabilised	6 Ha	7.42 Ha	
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	200 m/200 m	240 m/240 m	
4j	Number of settling ponds	1	Nil	
4k	Specific comments of inspecting officer on waste dump management	Overburden wastes and mineral reject management are being carried out as per the approved proposals.		

Solid Waste Management-Backfilling

S.N.	Item	Proposals	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Nil	Nil	
5b	Area under backfilling of mined out area	Nil	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Nil	Nil	
5d	Total area fully reclaimed & rehabilitated	Nil	Nil	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Existing pits were not matured by backfilling as ore/mineral not exhausted.		

Progressive Mine Closure Plan

Sl.N	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Yes	Yes	
6b	Area available for rehabilitation (ha).	Nil	Nil	
6c	afforestation done (ha).	6 Ha	7.42 Ha	
6d	No. of saplings planted during the year	15000	16000	
6e	Cumulative no. of plants	--	166909	
6f	Any other method of rehabilitation	N/A	N/A	
6g	Cost incurred on watch and care during the year	Rs. 3225000	Rs. 8928046	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	N/A	N/A	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	N/A	N/A	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	N/A	N/A	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	N/A	N/A	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	N/A	N/A	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	N/A	N/A	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	N/A	N/A	
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	N/A	N/A	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring (core zone and buffer zone) proposed	Environmental monitoring (core zone and buffer zone) carried out.	M/s CEMC Pvt. Ltd
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Lessee has implementing PMCP proposals as per approved document.		

Mineral Conservation

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting by within lease area proposed.	Grade wise sorting by within lease area. As per proposals	
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	Chromite Ore of following different size and grade proposed to be sorted out and dispatched (Below 40 % Cr2O3;40 to 52 % Cr2O3 and 52 % & above Cr2O3) Mainly friable/fines	As per proposals	

		ore only		
7d	Any beneficiation process at mines	Wet beneficiation of Mineral reject (10 to 30 % Cr ₂ O ₃) proposed.	Wet beneficiation method carried out.	Chrome Ore Beneficiation Plant
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Grade-wise soring & dispatches of ore/mineral to prospective buyers and there was no mineral conservation issue as stacking of mineral reject/sub-grade ore carried out as proposed.		

Environment

S.N.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Separate removal and utilization of topsoil proposed.	Separate removal and utilization of topsoil carried out.	
8b	Concurrent use or storage of topsoil	Concurrent use or storage of topsoil proposed	Concurrent use or storage of topsoil carried out.	Used at Dump Slope
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps for overburden proposed	Separate dumps for overburden made	OB 373558 – 375375E 2326875 - 2328504N
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposal	Not carried out	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No such proposal	Not carried out	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)		16000 Within ML	Sisoo, Bamboo, Mahagonny, Chhatiana, Neem, Karanja, Arjuna
8g	Survival rate	85%	93.81%	
8h	Water sprinkling on roads to control airborne dust	Regular sprinkling of water on Haul roads, Waste dump using Water tanker to suppress the dust proposed	Carried Out with water tankers having capacity of 24000, 20000 and 12000 litres.	
8i	General remarks of inspecting officer on aesthetic beauty in and 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.		

Compliance of Rule 45

S.N.	Item	Observation of I/Officer		Remarks
9a	Status of submission of Monthly and Annual returns	Regularly submitting the MRs/ARs on-time.		
S.N..	Actual in field	Item	Details GIVEN in A.R	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manager: Sri Ganeswar Bhuyan, Mining Engineer: Sri Santanu Kumar Aich Geologist: Miss Tanya Sinha	Mines Manager: Sri Ganeswar Bhuyan, Mining Engineer: Sri Santanu Kumar Aich Geologist: Shri Dharnidhar Naik	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	(1) Covered under current (O/C) Workings 204.330 Ha (2) Used for Waste Disposal- 140.990 Ha (3) Occupied by plant buildings, residential, welfare, buildings and roads-28.500 Ha (4)Other Purpose (Mineral Storage etc)- 38.900 Ha	Appears to be correct.	
9d	Scrutiny of Annual return on afforestation	16000 within ML	Appears to be correct.	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	208100.99(30 % Cr ₂ O ₃)	Appears to be correct.	

9f	Scrutiny of Annual return on ROM stock and/or graded ore	Nil	Appears to be correct.	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	<u>Fines:</u> Below 40% Cr2O3- ₹8605.35 40% to below 52 % Cr2O3-₹20440.64 52% and above Cr2O3- ₹25287.49 CONCENTRATES- ₹14033.00 Cost of production is ₹9523.94	Appears to be correct.	
9i	Scrutiny of Annual return on fixed assets	₹ 1358832398	Appears to be correct.	
9k	Scrutiny of Annual return on mining machineries	Dumper-78 Shovel-12 Dozer-8 Drill-02 Motor Grader-02 Front End Loader-01 Water Tanker-06	Observed to be correct	

(विक्रम देशपांडे)
सहायक खान नियंत्रक