

**INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/CR/JJP/MCDR-13/BBS

Mine code : 11ORI19013

- (i) Name of the Inspecting : **RAM**) **RAMKISHAN R**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Tarini Prasad Mohanty, Agent
Official with
Designation
- (iv) Date of Inspection : 04/01/2021
- (v) Prev.inspection date : 29/08/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KALIAPANI**
- (b) **Registration NO.** : **62**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : JAJPUR
- Village : KALIAPANI
- Taluka : SUKINDA
- Post office : KALIAPANI
- Pin Code : 755047
- FAX No. : 06726-224384
- E-mail : ialmines@yahoo.com
- Phone : 06726-268297,98,224274
- (f) Police Station :
- (g) First opening date : 14/09/2000
- (h) Weekly day of rest : SUN
2. Address for : VILL & PO: KALIAPANI
correspondance POLICE STATION : TOMKA
DIST: JAJPUR, PIN: 755 047, ORISSA
3. (a) Lease Number : ORI0745
- (b) Lease area : 64.46
- (c) Period of lease : 30
- (d) Date of Expiry : 16/07/2030
4. Mineral worked : CHROMITE Main

5. Name and Address of the

Lessee : M/S BALASORE ALLOYS LTD.
 BALAGOPALPUR - 756020
 BALASORE ORISSA BALASORE
 ORISSA
 Phone:06782-275780
 FAX :06782-27524, 275786

Owner : SANTANU MOHAPATRA
 C-66,PALASAPALLI
 BHUBANESWAR-20 BHUBNESHWAR
 ORISSA
 Phone:
 FAX :

Agent : Tarini Prasad Mohanty
 At/ po-kaliapani Teh-
 sukinda Dist-Jajpur JAJPUR
 ORISSA
 Phone: 06782275781
 FAX : 06782275781

Mining Engineer

Name : P K Mohapatra,Full Time
 Qualification : B.E (mining)
 Appointment/ : 16/01/2004
 Termination date

Geologist

Name : PREM PRAKASH,Part Time
 Qualification : M.Sc (GEOLOGY)
 Appointment/ : 14/09/2000
 Termination date

Manager

Name : Amarnath Dhar
 Qualification : Diploma in Mining & 1st class Manager Ce
 Appointment/ : 16/05/2016
 Termination date

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	20/04/2000
Plan/Scheme of Mining	:	Modif.of approved Mining Plan	10/09/2004
	:	Mining Scheme rule 12 MCDR1988	15/12/2005
	:	Modif.approved Mining Scheme	25/11/2008
	:	Mining Scheme rule 12 MCDR1988	18/05/2010
	:	Modif.approved Mining Scheme	25/07/2014
	:	Mining Scheme rule 12 MCDR1988	27/03/2015
	:	Modif.approved Mining Scheme	07/02/2019
	:	MP review under 17(1) MCR 2016	07/01/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No such specific proposal.	Entire potential mineralised area explored under G1 level.	
1b	Exploration over lease area for geological axis 1 or 2	Not proposed.	Entire potential mineralised area explored under G1 level.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not applicable	Nil	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Entire potential mineralised area explored under G1 level.	Entire potential mineralised area explored under G1 level.	
1e	Balance reserve as on 01/04/20	chromite ore reserves as per approved document on 07.01.2020 are 25.288 mi.t. and resources are 5.262 mil.t.	due to addition/dpeletion over the period of time the reserves are 25.186 mil.t. and resources are 5.262 mil.t. as on 01.04.2020.	
1f	General remarks of inspecting officers on geology, exploration etc		Entire potential mineralised area has been explored under G1 level.	

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	open pit mining with a single quarry and underground mining (Boundary pillar Mining method) during the year 2019-20.	carried out.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No generation of top soil and seperate benches for OB and mineral are proposed	No top soil generated, seperate becnhes for OB and mineral are mainatined.	
2c	Stripping ratio or ore to OB ratio	1:9.11 t/cu.m.	1:2.31 t/cu.m.	due to irregular nature of ore deposit and also due to less development.
2d	Quantity of topsoil generation in m3	Not applicable	Nil	
2e	Quantity of overburden generation in m3	1589670 cu.m. during the year 2019-20.	397140 cu.m.	due to irregular nature of ore deposit and also due to less development.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		the development is carried out in one single pit and underground mining (Boundary pillar mining method.)	

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	one pit and production is also propsoed by boundary pillar mining method of underground mining.	carried out.	

3b	Quantity of ROM mineral production proposed	174392 t by opencast mining and 240340 t by underground mining method during the year 2019-20..	171451 t by opencast mining and 17862 t by underground mining method	
3c	Recovery of sailable/usable mineral from ROM production	409132 t of salable ore and 17885 t of mineral reject	152622 t of salable ore and 36691 t of mineral reject	
3d	Quantity of mineral reject generation	17885 t	36691 t	
3e	Grade of mineral rejects generation and threshold value declared.	+10%-40% Cr2O3	+10%-40% Cr2O3	
3f	Quantity of sub grade mineral generation.	Not applicable	Nil	
3g	Grade of sub grade mineral generation	Not applicable	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised.	Mechanised.	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not proposed.	Nil	Already beneficiation is carried out in the mine for low grade ore.
3j	Provision of drilling and blasting in mineral benches	drilling and blasting is proposed.	carried out.	

3k	Provision of mining machineries in mineral benches	shovel and dumper combination is proposed for opencast mining excavation and material handling.	carried out.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	bench height proposed is 8m.	maintained.
3m	Total area covered under excavation/pits	22.599 ha	20.49 ha
3n	Ore to OB ratio for the pit/mine during the year.	1:9.11 t/cu.m.	1:2.31 t/cu.m.
3o	Total area put in use under different heads at the end of year	total area put to use at the end of plan period is 64.463 ha	64.45 ha
3p	Production of ROM mineral during the last five year period as applicable	2015-16: 505746 t 2016-17: 504469 t 2017-18: 518578 t 2018-19: 493747 t 2019-20: 414732 t	2015-16: 412017 t 2016-17: 280376 t 2017-18: 242916 t 2018-19: 209595 t 2019-20: 189313 t
3q	General remarks of inspecting officers on method of mining etc.		production is carried out from single pit as proposed and also by boundary pillar mining method.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	seperate dump for OB & mineral reject are proposed.	separte dump for OB and mineral reject are maintained.
4b	Location of topsoil, OB and mineral reject dumps	waste dump-1 is north west of the lease area, dump-2 is also north west side of the lease area and dump-3 is south eastern side of the lease area. mienral reject dump is at north eastern side. of the lease area.	maintained.
4c	Number of dumps within lease area and outside of lease area	3 nos dumps with in lease area.	3 nos dumps with in lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	waste dump-1 is north west of the lease area, dump-2 is also north west side of the lease area and dump-3 is south eastern side of the lease area. mienral reject dump is at north eastern side. of the lease area.	waste dump-1 is north west of the lease area, dump-2 is also north west side of the lease area and dump-3 is south eastern side of the lease area. mienral reject dump is at north eastern side. of the lease area.
4e	Number of active and alive dumps.	3 nos.	3nos.
4f	Number of dead dumps.	Not applicable	Nil
4g	Number of dumps established.	Not applicable	Nil

4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	provided.
4i	Length of Retaining wall or garland drain all along dumps	105 m.	150 m.
4j	Number of settling ponds	Not applicable	Nil
4k	Specific comments of inspecting officer on waste dump management		waste management is carried out as proposed.

Solid Waste Management - Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Area not matured for reclamation.	Nil	
5b	Area under backfilling of mined out area	Not applicable	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not applicable	Nil	
5d	Total area fully reclaimed and rehabilitated	Not applicable	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Area not matured for reclamation.	

Progressive Mine Closure Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	PMCP report to submitted. submitted before 1 st July		
6b	Area available for rehabilitation (ha) .	Not applicable	Nil	
6c	afforestation done (ha).	1.5 ha during the year 2019-20.	2 ha	
6d	No. of saplings planted during the year	1500	2500	
6e	Cumulative no .of plants		83040	
6f	Any other method of rehabilitation	Not applicable	Nil	
6g	Cost incurred on watch and care during the year		Not available	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Not applicable	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not applicable	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	Not applicable	Nil	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not applicable Nil		
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not applicable Nil		
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not applicable Nil		
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not applicable Nil		
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not applicable Nil		
6p	Compliance of environmental monitoring (core zone and buffer zone)	periodical environmental monitoring of core zone and buffer zone are proposed.	carried out.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		PMCP measures were carried out as proposed.	

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	grade-wise sorting of mineral is proposed.	grade-wise sorting of mineral is carried out.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	mechanical.	mechanical.
7c	Different grade of mineral sorted out at mines.	Below 40% Cr2O3 and above 40% Cr2O3	Below 40% Cr2O3 and above 40% Cr2O3
7d	Any beneficiation process at mines	beneficiation is proposed.	beneficiation is carried out.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		grade-wise sorting of mineral is carried out.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Not applicable	Nil	
8b	Concurrent use or storage of topsoil	Not applicable	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	seperate dumps for OB and mineral rejects proposed.	seperate dumps for Ob and mineral rejects are maintained.	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not applicable	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	dump plantation is proposed.	carried out.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	1500 nos	2500 nos
8g	Survival rate		90%
8h	Water sprinkling on roads to control airborne dust	water sprinkling by mobile water sprinkler proposed.	carried out.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		aesthetic beauty in and around the mines area is maintained.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly and annual returns are to be submitted as per rule 45 of MCDR, 2017	submitted.	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer 12, Diploma Mining Engineer 5, Geologist 5	found to be in order.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) Workings: 20.49 ha, Used for waste disposal: 34.32 ha, etc.,	found to be in order.
9d	Scrutiny of Annual return on afforestation	2500 nos	2500 nos
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	36691 t	36691 t
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM closing stock is Nil	found to be in order.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	production cost is Rs. 5737.89	Prduction cost is Rs. 5737.89
9h	Scrutiny of Annual return on fixed assets	Rs. 716422027	Rs. 716422027
9k	Scrutiny of Annual return on mining machineries	SHOVEL (HYDRAULIC) 2.400 CUM 1, DUMPER 25.000 TONNE 40, DOZER 165.000 HP 1 etc.,	found to be in order.

Details of violations observed during current inspection and compliance position of violation pointed out

Violation observed		Show cause position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on

Date :

(RAMKISHAN R)

Indian Bureau of Mines