

**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, Shri Amarnath Dhar
Official with
Designation
- (iv) Date of Inspection : 29/08/2018
- (v) Prev.inspection date : 06/01/2018

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

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Nil	Entire potential mineralised area explored under G1 level.
1b	Exploration over lease area for geological axis 1 or 2	Not proposed during the year 2017-18. mineralised area has been explored under G1 level.	5 nos carried out in the year 2017-18.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal.	exploration agency: Maheswari Mining ltd., expenditure made: 40.52 lakhs.	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal.	Nil	
1e	Balance reserve as on 01/04/20	chromite ore reserves as per approved document on 15.03.2015 are 30.66 mt. and resources are 2.43 mt.	based on the addition/depletion over the period of time the remaining reserves as on 01.04.2018 are 29.72 mt. and resources are 2.43 mt.	Nil
1f	General remarks of inspecting officers on geology, exploration etc	No comments to offer.	Entire potential mineralised area has been explored under G1 level.	Nil

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	open pit mining with a single quarry and underground mining	open pit minig with single quarry is carried out but underground mining not started.	Nil.

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No generation of top soil and separate benches for OB and mineral are proposed with 8 m bench height.	No top soil generated, separate benches for OB and mineral are maintained with 8 m height benches.	Nil
2c	Stripping ratio or ore to OB ratio	1: 1.61 t/cu.m.	1:2.44 t/cu.m.	Due to more development and variation in nature of ore deposit.
2d	Quantity of topsoil generation in m3	No proposal.	Nil	Nil
2e	Quantity of overburden generation in m3	837281 cu.m. for the year 2017-18.	593724 cu.m.	variation is due to proposed common boundary working with JSL, not carried out due to want of statutory clearance.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	No comments to offer.	the development is carried out in one single pit and underground mining has not yet started.	Nil

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One single pit, underground mining	One single pit and underground mining has not yet started.	Nil
3b	Quantity of ROM mineral production proposed	518578 tonnes during the year 2017-18 by open pit mining	242916 tonnes.	common boundary working with JSL not carried out due to want of statutory clearnace.

3c	Recovery of sailable/usable mineral from ROM production	No such specific proposal. However ROM production of 518578 tonnes and mineral rejects of 85815 cu.m. were proposed during the year 2017-18.	242916 tonnes of ROM production and 41988 cu.m. of mineral rejects were generated.	Nil
3d	Quantity of mineral reject generation	Nil	Nil	Nil
3e	Grade of mineral rejects generation and threshold value declared.	Nil	Nil	Nil
3f	Quantity of sub grade mineral generation.	85815 cu.m.	41988 cu.m.	variation is due to less development work.
3g	Grade of sub grade mineral generation	+10%-40% Cr2O3	+10%-40% Cr2O3	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	It is a captive mine and low grade ore is processed at beneficiation plant to produce concentrate.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal.	Nil	Already beneficiation is carried out in the mine for low grade ore.
3j	Provision of drilling and blasting in mineral benches	100 mm dia drill, with deep hole blasting.	100 mm dia drill with emulsion/slurry explosive with initiation by delay detonators.	Nil
3k	Provision of mining machineries in mineral benches	excavator, dumper and drill machines are proposed.	excavator, dumpers and drill machines are deployed on benches.	Nil

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	bench height proposed is 8m.	bench height maintained is 8m.	Nil
3m	Total area covered under excavation/pits	22.022 ha till the end of plan period i.e. up to 2019-20.	19.85 ha till the end of year 2017-18.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:1.61 t/cu.m.	1:2.44 t/cu.m.	Due to more developemnt and variation in nature of ore deposit.
3o	Total area put in use under different heads at the end of year	oc workings: 22.022 ha, waste dumps: 34.17 ha, plant: 0.24 ha	oc workings: 19.85 ha, waste dumps: 33.61 ha, plant: 0.24 ha	Nil
3p	Production of ROM mineral during the last five year period as applicable	2013-14: 272100 t 2014-15: 565000 t 2015-16: 505746 t 2016-17: 504469 t 2017-18: 518578 t	2013-14: 207989 t 2014-15: 341050 t 2015-16: 412017 t 2016-17: 280376 t 2017-18: 242916 t	production is less due to non working od common boundary mning with JSL and underground mining.
3q	General remarks of inspecting officers on method of mining etc.	No comments to offer.	production is carried out from single pit as proposed. but common boundary working with JSL has not been started and also underground mining is not started till the date of inspection.	Nil

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.	Nil
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.	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.	Nil
4c	Number of dumps within lease area and outside of lease area	3 nos dumps with in lease area.	3 nos of dumps with in lease area.	Nil
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.	all dumps are with in ultimate pit limit.
4e	Number of active and alive dumps.	3 nos.	3 nos.	Nil
4f	Number of dead dumps.	Nil	Nil	Nil
4g	Number of dumps established.	Nil	Nil	Nil

4h	Whether Retaining wall or garland drain all along dumps are there.	1130 m of retaining wall during the year 2017-18.	1170 m	Nil
4i	Length of Retaining wall or garland drain all along dumps	1130 m proposed.	1170 m carried out.	Nil
4j	Number of settling ponds	de silting of settling ponds of 121 cu.m are proposed during the year 2017-18.	de silting of settling ponds of 121 cu.m carried out	Nil
4k	Specific comments of inspecting officer on waste dump management	No comments to offer.	common boundary dumping proposed with JSL has not been carried out.	violation siissued on date 05/09/2018.

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Not proposed.	pit is not matured for reclamation.	Nil
5b	Area under backfilling of mined out area	Nil	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Nil	Nil	Nil
5d	Total area fully reclaimed and rehabilitated	Nil	Nil	Nil

5e	General remarks of inspecting officers on backfilling and reclamation etc.	No comments to offer.	Area not matured for reclamation.	Nil.
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Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	submit with in stipulated time farme.	submitted with in the stipulated time period.	Nil
6b	Area available for rehabilitation (ha) .	Nil	Nil	Nil
6c	afforestation done (ha).	1.03 ha	1.03 ha	Nil
6d	No. of saplings planted during the year	1580 nos	vertiver plantaion carried out on dumps.	vertiver plantation carried out to stabilised the dumps.
6e	Cumulative no .of plants	No proposal.	77793 nos.	Nil
6f	Any other method of rehabilitation	Nil	Nil	Nil
6g	Cost incurred on watch and care during the year	Not specified	durturing the year 2017-18 Rs 279200 was the expenditure.	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Nil	Nil	Nil

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Nil	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Nil	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Nil	Nil	Nil

6p	Compliance of environmental monitoring (core zone and buffer zone)	regular periodical monitoring of environmental parameters like quality of air, water and noise are proposed.	periodical monitoring of environmental parameters like quality of air, water and noise are being carried out.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	No comments to offer.	Mine is not matured for reclamation.	Nil

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	grade wise mineral sorting is proposed.	grade wise mineral sorting is carried out.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	Nil
7c	Different grade of mineral sorted out at mines.	Below 40% Cr2O3 40% to below 52% Cr2O3 52% Cr2O3 and above and concentrates.	Below 40% Cr2O3 40% to below 52% Cr2O3 52% Cr2O3 and above and concentrates.	Nil
7d	Any beneficiation process at mines .	beneficiation is proposed for low grade ore to produce concentrates.	beneficiation is carried out for low grade ore to produce concentrates.	Nil

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No comments to offer.	low grade ore is beneficiated in the COB plant to produce concentrates.	Nil
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Not proposed as there is no generation of top soil.	Nil	Nil
8b	Concurrent use or storage of topsoil	Nil	Nil	No generation of top soil.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	seperate dumps for OB and mineral rejects proposed. 3 nos of waste dumps and one mineral reject dump are proposed.	seperate dumps for OB and mineral rejects are maintained. 3 nos of waste dumps and one no of mineral reject dump.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Nil	Area not matured for reclamation.	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Nil	Area not matured for reclamation.	Nil

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	planation along the waste dump slopes proposed. type of planation not specified.	planation along the waste dump slopes carried out by vertiver planation.	Nil
8g	Survival rate	Not specified	70% as reported.	Nil
8h	Water sprinkling on roads to control airborne dust	water sprinkling by mobile water sprinkler are proposed for dust supression.	water sprinkling carried out for dust supression.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	No comments to offer.	dump stabilisation by vertiver plantation carried out.	Nil

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	submit before 1 st July of previous year annual return.	monthyl and annual return submitted with in stipulated time period.	with in stipulated time frame.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer: 5, Diploma Mining Engineer: 8, Geologist: 6	Graduate Mining Engineer: 5, Diploma Mining Engineer: 8, Geologist: 6	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) Workings: 19.850 ha, Used for waste disposal: 33.61 ha, plant, haul roads: 8.429 ha	Covered under current (O/C) Workings: 19.850 ha, Used for waste disposal: 33.61 ha, plant, haul roads: 8.429 ha	furnished in annual returns.
9d	Scrutiny of Annual return on afforestation	134000	134000	vertiver plantation

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	69333 tonnes	69333 tonnes	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM stock: 0 tonnes Below 40% Cr2O3: 520.259 tonnes fines, Below 40% Cr2O3: 238889.471 tonnes concentrates: 1431.141 tonnes	ROM stock: 0 tonnes Below 40% Cr2O3: 520.259 tonnes fines, Below 40% Cr2O3: 238889.471 tonnes concentrates: 1431.141 tonnes	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Production cost is Rs 5659.21	Production cost is Rs 5659.21	it is a captive mine
9h	Scrutiny of Annual return on fixed assets	RS 421594334	RS 421594334	Nil
9k	Scrutiny of Annual return on mining machineries	BLAST HOST DRILL: 2 nos DOZER: 3 nos SHOVEL (HYDRAULIC): 8 nos dumpers: 51 nos	BLAST HOST DRILL: 2 nos DOZER: 3 nos SHOVEL (HYDRAULIC): 8 nos dumpers: 51 nos	Nil

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
MCDR17	Rule 11(1)	05/09/2018			
MCDR17	Rule 37(1)	05/09/2018			

Date :

(RAMKISHAN R)

Indian Bureau of Mines