

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

**MCDR INSPECTION REPORT**

**Bhubaneshwar regional office**

**Mine file No :** ORI/CR/JJP/MCDR-16/BBS

**Mine code :** 11ORI19022

- (i) Name of the Inspecting : **RAM** ) **RAMKISHAN R**  
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri A K patra, Sr manager, Shri R N jena, Mines Mana  
Official with  
Designation
- (iv) Date of Inspection : 30/08/2018
- (v) Prev.inspection date : 18/01/2018

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **KALARANGIATTA**
- (b) **Registration NO.** : **173**
- (c) Category : A Other Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : JAJPUR
- Village : KALARANGIATTA
- Taluka : SUKINDA
- Post office : KALARANGIATTA
- Pin Code : 755028
- FAX No. : 06784-2517842
- E-mail : facormines@facor.in
- Phone : 06784-250598
- (f) Police Station : Sukinda
- (g) First opening date : 01/01/2012
- (h) Weekly day of rest : SUN
2. Address for : KALARANGITTA CHROMITE MINE  
correspondance FERRO ALLOYS CORPORATION LTD  
KALIAPANI, SUKINDA, DIST- JAJPUR
3. (a) Lease Number : ORI0846
- (b) Lease area : 23.8
- (c) Period of lease : 30
- (d) Date of Expiry : 17/04/2038
4. Mineral worked : CHROMITE Main

## 5. Name and Address of the

Lessee : FERRO ALLOYS CORPN. LTD  
 Shri Rohit Saraf, Joint  
 Managing Director & Nomited  
 Owner Ostapal, Kathpal &  
 Boula Chromite M BHADRAK  
 ORISSA  
 Phone:06784-251312, 250598, 250311  
 FAX :06784-251782

Owner : FERRO ALLOYS CORPORATION LTD  
 LAXMI BHAWAN, KUANS  
 BHADRAKH JAJPUR ORISSA  
 Phone:  
 FAX :

Agent : SHRI R K SINGH  
 JAJPUR ORISSA  
 Phone:  
 FAX :

## Mining Engineer

Name : SHRI A K PATRA, Full Time  
 Qualification : AMIE  
 Appointment/ : 05/04/2013  
 Termination date

## Geologist

Name : SHRI S K BISWAL, Full Time  
 Qualification : MSC GEOLOGY  
 Appointment/ : 25/04/2015  
 Termination date

## Manager

Name : R.N. Jena  
 Qualification : B.E (MINING)  
 Appointment/ : 21/08/2017  
 Termination date

6. Date of approval of Mining : Mining Scheme rule 12 MCDR1988 28/03/2013  
 Plan/Scheme of Mining : MP review under 17(1) MCR 2016 13/02/2018

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Nil	Nil
1b	Exploration over lease area for geological axis 1 or 2	4 nos of boreholes proposed during the year 2017-18.	4 nos of boreholes carried out during the year 2017-18.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No such specific proposal.	exploration carried out by inhouse set up.	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	27 nos boreholes were proposed to brought the are under G1/G2 level during the plan period.	27 nos boreholes were proposed to brought the are under G1/G2 level during the years 2018-19 to 2021-22.	Nil
1e	Balance reserve as on 01/04/20	As per the approved document on 13/02/2018 the chromite ore reserves are 3.842 lakh tonnes and resources are 10.235 lakh tonnes.	due to addition/depletion over the period of time the chrome ore reserves as on 01.04.2018 are 3.631 lakh tonnes and resources are 10.235 lakh tonnes.	Nil
1f	General remarks of inspecting officers on geology, exploration etc	No comments to offer.	exploration has been carried out as proposed.	Nil

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	single quarry is proposed for developemnt during the year 2017-18 in the souther side of the lease area	development is carried out in single quarry in the southerside of the lease area.	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	seperate becnhes in overburden and mineral are proposed with 6 m height benches.	seperate becnhes in overburden and mineral are maintained with 6 m height benches.	Nil
2c	Stripping ratio or ore to OB ratio	1: 2.9 t/cu.m. during the year 2017-18.	1:1.87 t/cu.m.	due to irregual behaviour of orebody.
2d	Quantity of topsoil generation in m3	280 cu.m. during the year 2017-18	3222 cu.m.	irregularity in the sub surafce.
2e	Quantity of overburden generation in m3	1,45,000 cu.m. during the year 2017-18.	93,354 cu.m.	due to variations in strike and width of the ore body.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	No comments to offer.	development is carried out in the proposed pit as per approved mining plan.	Nil

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	single pit is proposed during the eyar 2017-18.	production is carried out from single pit.	Nil
3b	Quantity of ROM mineral production proposed	0.5 lakh tonnes during the year 2017-18.	0.498 lakh tonnes	Nil

3c	Recovery of sailable/usable mineral from ROM production	production of 0.5 lakh tonnes of ROM was proposed with no generation of mineral rejects during the year 2017-18.	0.498 lakh tonnes produced with nil generation of mineral rejects.	all ore above hreshold value 10% cr203 are being utilised in captive plant.
3d	Quantity of mineral reject generation	Not proposed.	Nil	No generation of mineral rejects.
3e	Grade of mineral rejects generation and threshold value declared.	Not proposed	Nil	Nil
3f	Quantity of sub grade mineral generation.	Not proposed.	Nil	Nil
3g	Grade of sub grade mineral generation	Not proposed.	Nil	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not proposed.	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	no drilling and blsting is proposed. excavtion is proposed by shovel dumper combination.	No drilling blasting is carried out. excavation is carried out by shopvel dumper combination.	Nil
3k	Provision of mining machineries in mineral benches	excavation is proposed by shovel dumper combination	excavation of mineral benches are carried out by shovel dumper combination.	Nil

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	bench height proposed is 6 m.	bench height maintained is 6 m.	Nil
3m	Total area covered under excavation/pits	6.903 ha.	6.903 ha	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1: 2.9 t/cu.m.	1: 1.87 t/cu.m.	due to variations in strike and width of the ore body.
3o	Total area put in use under different heads at the end of year	Pit- 6.903 Ha waste dump: 3.070 Ha infra, ETP roads: 11.781 Ha	Pit- 6.903 Ha waste dump: 3.070 Ha infra, ETP roads: 11.781 Ha	Nil
3p	Production of ROM mineral during the last five year period as applicable	2013-14 0.500 lakh tonnes 2014-15 0.500 2015-16 0.500 2016-17 0.500 2017-18 0.500	2013-14 0.497 lakh tonnes 2014-15 0.483 2015-16 0.496 2016-17 0.493 2017-18 0.498	Nil
3q	General remarks of inspecting officers on method of mining etc.	No comments to offer.	production is carried out from the proposed pit.	Nil

#### Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	seperate dumping for top soil and OB proposed.	seperate dumping for top soil and OB maintained.	Nil

4b	Location of topsoil, OB and mineral reject dumps	waste dump is located in northern side of the lease area. top soil is also northern side of the lease area near to OB dump are proposed.	waste dump is located in northern side of the lease area. top soil is also northern side of the lease area near to OB dump are maintained.	Nil
4c	Number of dumps within lease area and outside of lease area	1 no of waste dump.	1 no of waste dump.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	waste dump located northern side of the lease area.	waste dump is located northern side of the lease area.	dump is not in UPL.
4e	Number of active and alive dumps.	one no of dump.	one no of dump.	Nil
4f	Number of dead dumps.	Not proposed.	Nil	the present dump is active.
4g	Number of dumps established.	Not proposed.	Nil	Present dump is active.
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall -280M Garland drain -280M proposed in the northern side of the dump	Returning wall -330M Garland drain- 410M constructed in the northern side of the dump.	Nil
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall -280M Garland drain -280M	Returning wall -330M Garland drain- 410M	Nil
4j	Number of settling ponds	Nil	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management	No comments to offer	one waste dump is maintained with i lease area which is active.	Nil

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Solid Waste Management - Backfilling:

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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.	Nil	Are not matured for reclamation.
5b	Area under backfilling of mined out area	Not proposed.	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not proposed.	top soil generated is being utilised for plannation.	Nil
5d	Total area fully reclaimed and rehabilitated	Not proposed.	Nil	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	No comments to offer.	Area not matured for reclamation.	Nil

#### 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 stipulate time period.	submitted for the year 2017-18 with in stipulated time period.	Nil
6b	Area available for rehabilitation (ha) .	Not proposed.	Nil	Nil
6c	afforestation done (ha).	0.862 ha	0.866 ha	on waste dump slopes.
6d	No. of saplings planted during the year	2155 nos during the year 2017-18.	2165 nos planated.	Nil
6e	Cumulative no .of plants	Not proposed.	9295 nos.	Nil



6f	Any other method of rehabilitation	Nil	Nil	Nil
6g	Cost incurred on watch and care during the year	Rs 2.16 Lakh	Rs 2.45 Lakh	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( L x B x D	Not proposed	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)	periodical monitoring of environment paramaters are proposed.	periodical monitoring of environmental parameters are 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. plantation is carried out onmatured dump slopes only.	Nil

#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	gradewsie sorting is porposed. +40% cr2o3 +10-40% cr2o3	grade wise sorting carried out.+40% cr2o3 +10-40% cr2o3	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.	+40% cr2o3 +10-40% cr2o3	+40% cr2o3 +10-40% cr2o3	all the material is dispachted to captive plant.
7d	Any beneficiation process at mines	Not proposed	Nil	Nil

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No comments to offer.	all the ROM produced from the mines is dispatched to captive plant.	Nil
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**Environment:**

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

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	2155 nos of plants are proposed during the year on dump for the year 2017-18.	2165 nos of plantation carried out during the year 2017-18.	Nil
8g	Survival rate	Not specified.	95%	Nil
8h	Water sprinkling on roads to control airborne dust	haul road dust suppression by mobile water sprinklers.	haul road dust suppression by mobile water sprinklers is carried out.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	No comments to offer.	aesthetic beauty in around the mie lease area is good.	Nil

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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.	Monthly and annual return are submitted with in stipulated time period.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer:1 Geologist:1 Manager:1	Mining Engineer:1 Geologist:1 Manager:1	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit area:6.903Ha. Reclaimed area:Nil Dump:3.070 Ha. Others: 13.827Ha.	Pit area:6.903Ha. Reclaimed area:Nil Dump:3.070 Ha. Others: 13.827Ha.	Nil
9d	Scrutiny of Annual return on afforestation	2165 nos.	2165 nos	Nil

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM stock:Nil Graded ore : (Closing stock) Below 40% :11489.194Tonne 40% to 52%:670.433Tonne Above 52%Nil	ROM stock:Nil Graded ore : (Closing stock) Below 40% :11489.194Tonne 40% to 52%:670.433Tonne Above 52%Nil	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	production cost: Rs 2154.47	production cost: Rs 2154.47	It is a captive mine
9h	Scrutiny of Annual return on fixed assets	Rs 4404313	Rs 4404313	Nil
9k	Scrutiny of Annual return on mining machineries	Back hoe-3nos,Front end loader-1no.,Dozer-1, dumpers: 4 nos	Back hoe-3nos,Front end loader-1no.,Dozer-1, dumpers: 4 nos	Nil

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

Violation observed		Show couse position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on
Rule 11(1)	05/09/2018		

**Date :****(RAMKISHAN R)**

Indian Bureau of Mines