

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

**MCDR INSPECTION REPORT**

**Bhubaneshwar regional office**

**Mine file No :** ORI/IRON/KJR/MCDR-49/BBS

**Mine code :** 30ORI08071

- (i) Name of the Inspecting : **S010** ) **SHRI G.C. SETHI**  
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri A.K.Chaudhary, Geologist  
Official with  
Designation
- (iv) Date of Inspection : 08/09/2019
- (v) Prev.inspection date : 17/04/2018

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **ROIDA (185 AC)**
- (b) **Registration NO.** : **IBM/1097/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : TONTO (TANTRA)
- Taluka : CHAMPUA
- Post office : BHADRASAHI
- Pin Code : 758035
- FAX No. : 06767-270106
- E-mail : knram@athagroup.in
- Phone : 06767-275225
- (f) Police Station : Barbil
- (g) First opening date : 22/04/1958
- (h) Weekly day of rest : SUN
2. Address for : ROIDA IRON MINE (185AC) OF K.N.RAM  
correspondance AT-TROANTO  
PO-BHADRSAHI, DIST-KEONJHAR
3. (a) Lease Number : ORI0069
- (b) Lease area : 74.86
- (c) Period of lease : 30
- (d) Date of Expiry : 02/09/1987
4. Mineral worked : IRON ORE Main

## 5. Name and Address of the

Lessee : K.N.RAM&CO  
 AT/PO-GUA DIST-SINGHBHUM  
 WEST JHARKHAND SINGHBHUM  
 (WEST) JHARKHAND  
 Phone:  
 FAX :

Owner : K.N.RAM  
 AT/PO-GUA SINGHBHUM (W)  
 JHARKHAND SINGHBHUM (WEST)  
 JHARKHAND  
 Phone:  
 FAX :

## Mining Engineer

Name : G S Bera, Full Time  
 Qualification : BE Mining  
 Appointment/ : 01/04/2014  
 Termination date

## Geologist

Name : A K Choudhury, Full Time  
 Qualification : MSC Geology  
 Appointment/ : 07/07/2013  
 Termination date

## Manager

Name : P.K. MOHANTY  
 Qualification : Diploma(Mining), Ist class manager certi  
 Appointment/ : 27/11/2014  
 Termination date

6. Date of approval of Mining	:	Modif.approved Mining Scheme	24/02/2004
Plan/Scheme of Mining		Renewal under rule 24 MCR1960	26/07/2005
		Renewal under rule 24 MCR1960	31/01/2008
		Mining Scheme rule 12 MCDR1988	28/03/2012
		Modif.approved Mining Scheme	25/06/2015
		MP modif under 17(3) MCR 2016	23/09/2016
		MP modif under 17(3) MCR 2016	12/11/2018
		FMCP under 23C(1)	22/11/2018

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No backlog.	The entire lease area of 74.867 ha is explored under G1 level of exploration.	Nil
1b	Exploration over lease area for geological axis 1 or 2	The entire lease area of 74.867 ha is explored under G1 level of exploration.	The entire lease area of 74.867 ha is explored under G1 level of exploration.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not applicable as the entire lease area of 74.867 ha is explored under G1 level of exploration.	Nil	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	The entire lease area of 74.867 ha is explored under G1 level of exploration.	The entire lease area of 74.867 ha is explored under G1 level of exploration.	Nil
1e	Balance reserve as on 01/04/20	Total reserves & resources estimated as per Review of mining plan approved on 23.09.2016 is as given below:- Proved and Probable category (111 & 122), 30.73 million tonnes and under mineral resources category (221 & 222), 5.76 million tonnes.	The balance reserves as on 01/04/2019 29.38 million tonnes.	Nil

1f	General remarks of inspecting officers on geology, exploration etc	The entire lease area of 74.867 ha is explored under G1 level of exploration.	No further exploration has been proposed and conducted during 2018-19 as the entire lease area of 74.867 ha is explored under G1 level of exploration.	Nil
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Quarry-2 and quarry-6.	The development is confined to quarry-2 and quarry-6.	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No topsoil exists. Separate benches in OB and ore zone with bench height of 6m each are envisaged.	Separate benches in overburden and in ore zone are formed as per the proposal.	No bench in topsoil maintained as no topsoil exists in the location proposed under excavation planning during 2018-19.
2c	Stripping ratio or ore to OB ratio	1:0.085 t/cu.m	1:0.10 t/cu.m	Nil
2d	Quantity of topsoil generation in m3	No top soil exists.	No top soil generated during 2018-19.	Nil
2e	Quantity of overburden generation in m3	295095 cu.m envisaged for 2018-19.	475742 tonnes of overburden/waste generated during 2018-19.	Nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	The development of the mine is restricted to quarry-2 and quarry-6	The mine development is confined to quarry-2 and quarry-6 as per the proposal.	Nil

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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	02 quarries viz. quarry no.-2 and quarry no.-6.	Workings are confined to quarry no.-2 and quarry no.-6.	Nil

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3b	Quantity of ROM mineral production proposed	3447013 tonnes of iron ore in 2018-19 .	2199849 tonnes Iron ore was produced during 2018-19.	Less ROM production reported due to want of EC for enhanced production during 2018-19.
3c	Recovery of sailable/usable mineral from ROM production	3447013 tonnes	2199849 tonnes	Nil
3d	Quantity of mineral reject generation	678348 tonnes of mineral reject/sub-grade envisaged for 2018-19.	The mineral reject/sub grade ore generated has been plended with the high grade ore in the prcess to make them salable	Nil
3e	Grade of mineral rejects generation and threshold value declared.	+45% Fe to - 55% Fe.	+45% Fe to -55% Fe.	Nil
3f	Quantity of sub grade mineral generation.	678348 tonnes of sub-grade /mineral reject generation envisaged for 2018-19.	The mineral reject/sub grade ore generated has been plended with the high grade ore in the prcess to make them salable.	Nil
3g	Grade of sub grade mineral generation	+45% Fe to - 55% Fe.	+45% Fe to -55% Fe.	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.	None	The sub-grade/mineral reject made salable in the process of blending with high grade iron ore.	Nil

3j	Provision of drilling and blasting in mineral benches	Deep hole drilling with pneumatic wagon drills and blasting of the holes with nitrate mixture such as powergel explosive. Ordinary detonators and nonel are used for initiation.	Deep hole drilling with pneumatic wagon drills and holes are blasted with nitrate mixture such as powergel explosive. Ordinary detonators and nonel are used for initiation.	Nil
3k	Provision of mining machineries in mineral benches	Combination of excavator and dumper.	Combination of excavator and dumper are deployed in the mine for excavation of the ore and waste.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes, bench height 6m are proposed.	Bench height is suitably matched with the loading excavator are deployed.	Nil
3m	Total area covered under excavation/pits	39.960 ha during approved plan period upto 2019-20.	About 37.230 ha. has been covered under excavation pits.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:0.085 t/cu.m	1:0.10 t/cu.m	Nil
3o	Total area put in use under different heads at the end of year	61.632ha	56.579ha	Nil

3p	Production of ROM mineral during the last five year period as applicable	Iron ore: 2014-15: 2188025 tonnes 2015-16: 2200826 tonnes 2016-17: 3503522 tonnes 2017-18: 3413810 tonnes 2018-19: 3447013tonnes	Iron ore: 2014-15: 2188025 tonnes 2015-16: 2200826 tonnes 2016-17: 3503522 tonnes 2017-18: 3413810 tonnes 2018-19: 2199849 tonnes	Less ROM porduced against the approved proposal due to want of EC for enhanced production during 2018-19.
3q	General remarks of inspecting officers on method of mining etc.	The ROM production was received from quarry-2 and quarry-6. Deep hole drilling with pneumatic wagon drills and holes are blasted with nitrate mixture such as powergel exlpositive. Ordinary detonators and nonel are used for initiation.		Nil

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Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No topsoil exist. However, provisions for separate dumping for overburden/waste is envisaged in the lone waste dump.	No topsoil exist. However, separate dumping for overburden/waste is done in the active waste dump.	Nil

4b	Location of topsoil, OB and mineral reject dumps	No topsoil exists. However, the proposed location of overburden and mineral rejects are given below:- OB: E-173 to E-549 and N-292 to S-109. MR: W-60 to W-300 and N-242 to N-440.	No topsoil exist. However, separate dumping for overburden/waste and mineral rejects are done. The location of the waste dump and mineral reject dump is as given below:- OB: E-228 to E-550 and N-285 to S-124. MR: W-60 to W-300 and N-242 to N-420.	Nil
4c	Number of dumps within lease area and outside of lease area	One	One	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	OB/waste dump is located in north eastern part of quarry-2, beyond the UPL.	OB/waste dump is located in north eastern part of quarry-2, beyond the UPL.	Nil
4e	Number of active and alive dumps.	One active dump.	One active dump.	Nil
4f	Number of dead dumps.	None	Nil	Nil
4g	Number of dumps established.	Not applicable.	Not applicable.	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	Yes	Nil
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall: 1418m & Garland drain:1418m	Retaining wall: 1778m & Garland drain:1778m	Nil
4j	Number of settling ponds	09	13	Nil
4k	Specific comments of inspecting officer on waste dump management		All around the waste dump and mineral reject dump, garland drain and retaining wall has been constructed.	Nil



## 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.	1.015 ha mined out area has been proposed for backfilling in 2018-19.	An extent of 1.015 ha mined out area was backfilled during 2018-19.	Nil
5b	Area under backfilling of mined out area	1.015 ha mined out area has been proposed for backfilling in 2018-19.	An extent of 1.015 ha mined out area was backfilled during 2018-19.	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No topsoil exists.	Not applicable.	Nil
5d	Total area fully reclaimed and rehabilitated	1.015 ha mined out area has been proposed for backfilling in 2018-19.	An extent of 1.015 ha mined out area was backfilled during 2018-19.	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.		An extent of 1.015 ha mined out area has been backfilled during 2018-19 as per the proposal.	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).	Annual report on PMCP has to be submitted under Rule 26(2) of MCDR,2017.	Annual report on PMCP has been submitted by the party for the year 2018-19.	Nil
6b	Area available for rehabilitation (ha) .	An extent of 0.685 ha mined out area is proposed for backfilling in 2018-19.	An 0.685 ha of mined out area has been backfilled during 2018-19.	Nil

6c	afforestation done (ha).	3.74 ha area envisaged in 2018-19.	In 2018-19 about 3.74 ha. area has covered for plantation.	Nil
6d	No. of saplings planted during the year	7460 nos. of saplings in 2018-19.	In 2018-19, about 14730 no. of saplings were planted.	Nil
6e	Cumulative no .of plants	Not specified.	Cumulatively 77490 nos. of saplings were planted.	Nil
6f	Any other method of rehabilitation	Not applicable.	Not applicable.	Nil
6g	Cost incurred on watch and care during the year	Rs. 15,000/-	Rs. 70,000/- was incurred towards watch and care of planted saplings.	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	An 1.015 ha mined out area is envisaged for backfilling in 2018-19.	An extent of 1.015ha mined out area has been backfilled during 2018-19.	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	An 1.015 ha mined out area is envisaged for backfilling in 2018-19.	An extent of 1.015ha mined out area has been backfilled during 2018-19.	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Not applicable.	Not applicable.	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal for water reservoir.	Not applicable.	Nil

6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not applicable.	Not applicable.	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not applicable	Not applicable	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not envisaged.	Not applicable	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not applicable.	Nil	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring of air, water and noise levels envisaged.	Quarterly monitoring of air, water and noise level are being carried out.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		In 2018-19, there are 14730 no. of saplings were planted by lessee. An extent of 1. 015 ha mined out area was also backfilled. Afforestation done on the slope of waste dump & safety zone. Regular monitoring of ambient air,water quality ,noise levels & vibration levels are done in the mine.	Nil

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Mineral Conservation:

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Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Gradewise sorting envisaged.	Gradewise sorting is being done.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanised.	Mechanised.	Nil
7c	Different grade of mineral sorted out at mines.	+45 to 55% Fe and +55% Fe.	+45 to 55% Fe and +55% Fe.	Nil
7d	Any beneficiation process at mines	None	Not applicable.	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Cut off of iron ore for the mine is +55%. Different grades of iron ore sorted out at mines are +55% Fe and 45 to 55% Fe. The sub grade/mineral rejects generated during mining operations are blended with high grade to make them salable.	Nil

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**Environment:**

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No topsoil exists.	Not applicable.	Nil
8b	Concurrent use or storage of topsoil	Not applicable.	Nil	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Provisions for separate dumping for overburden/waste and mineral rejects are envisaged.	Separate dumping for overburden/waste and mineral rejects are being done.	There is no top soil generation.

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	An extent of 1.015 ha mined out area has been proposed y for backfilling in 2018-19.	An extent of 1.015 ha mined out area has been backfilled during 2018-19.	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	An extent of 1.015 ha mined out area has been proposed y for backfilling in 2018-19.	An extent of 1.015 ha mined out area has been backfilled during 2018-19.	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	7460 nos of saplings plantation in the lease area is envisaged in 2018-19.	During the year 2018-19, there are 14730nos. saplings were planted in the lease.	Nil
8g	Survival rate	Not specified.	Survival rate is 79%.	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on the mine road is envisaged to control air borne dust.	Water sprinkling on the mine road is being done on regular basis to control air borne dust.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		In 2018-19, there are 17730 no. of saplings were planted as environmental protection measures. The aesthetic beauty in and around mined area is enhanced by cumulative plantation of 77490 nos. of saplings.	Nil

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Compliance of Rule 45:

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Sl.No.	Item	Propasals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns	All the monthly returns pertaining to the April 2018 to March 2019 and annual return for 2018-19 were submitted to this office.	All the monthly returns pertaining to the year 2018-19 and annual return for 2018-19 were submitted to this office.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer-2, Diploma mining Engineer-3, Geologist-1	Graduate Mining Engineer-2, Diploma mining Engineer-3, Geologist-1 are deployed in the mine.	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	The extent of area degraded in different counts upto 2018-19 is as given below:- Pits-37.23 ha, reclaimed/rehabilitated-0.330ha, waste dump-8.21 ha, Mineral storage-4.421ha, Infra structure, roads & others- 3.416 ha and work done under progressive closure-0.685ha.	The extent of area degraded in different counts upto 2018-19 is as given below:- Pits-37.23 ha, reclaimed/rehabilitated-0.330ha, waste dump-8.21 ha, Mineral storage- 4.421ha, Infra structure, roads & others- 3.416 ha and work done under progressive closure-0.685ha.	Nil
9d	Scrutiny of Annual return on afforestation	14730 nos of saplings envisaged in the annual return submitted for 2018-19.	14730 nos of saplings planted during 2018-19.	Nil

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Found to be in order.	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Gradeswise stock i.e , 58% to below 60%, 60% to below 62% and 62% to below 65% have been furnished.	Gradeswise stock i.e , 58% to below 60%, 60% to below 62% and 62% to below 65% have been furnished.	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production- Rs 1274.89	Found to be in order.	Nil
9h	Scrutiny of Annual return on fixed assets	Fixed asset Rs 126770568/-	Fixed asset Rs 126770568/-	Nil
9k	Scrutiny of Annual return on mining machineries	A good fleet of mining machinereis are furnished in the annual return.	The deployment status of mining machineries are in order.	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	
MCDR17	Rule 35(2)	17/09/2019	22/11/2019				

**Date :**

**(SHRI G.C. SETHI)**

Indian Bureau of Mines