

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

**MCDR inspection REPORT**

**Bhubaneshwar regional office**

**Mine file No :** ORI/IRON/SNG/MCDR-2/BBS

**Mine code :** 30ORI13006

- (i) Name of the Inspecting : **RKR5** ) **RAJANI KANTA RAUTARAY**  
Officer and ID No.
- (ii) Designation : Assistant Mining Engineer
- (iii) Accompanying mine : Sh. A K Mishra, Mines Manager  
Official with  
Designation
- (iv) Date of Inspection : 12-APR-22
- (v) Prev.inspection date : 17-MAR-21

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **KALTA**
- (b) **Registration NO.** : **IBM/5662/2011**
- (c) **Category** : **A Other than Fully Mech.**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **ORISSA**
- District : **SUNDARGARH**
- Village : **KALTA**
- Taluka : **BONAI**
- Post office : **KALTA**
- Pin Code : **770052**
- FAX No. : **06625-234023**
- E-mail : **kimkalta@rediffmail.com**
- Phone : **06625-234036**
- (f) **Police Station** : **Koira**
- (g) **First opening date** : **06-JAN-60**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **KALTA IRON ORE MINE**  
**correspondance** : **AT/PO-KALTA**  
: **DIST-SUNDERGARH**
3. (a) **Lease Number** : **ORI0158**
- (b) **Lease area** : **3.34**
- (c) **Period of lease** : **20**
- (d) **Date of Expiry** : **17-JAN-04**
4. **Mineral worked** : **IRON ORE** **Main**

## 5. Name and Address of the

Lessee : M/s Steel Authority of India Ltd (SAIL)  
 Ispat Bhwan, Lodhi Road New  
 Delhi DELHI DELHI  
 Phone:011-24367481-86  
 FAX :011-24367015/22467458

Owner : SHRI HARINAND RAI  
 ISPAT BHAWAN LODHI ROAD  
 DELHI DELHI  
 Phone: 01124367481  
 FAX : 01124367015

Agent : SHRI P K RATH  
 M/S SAIL AT/PO-TENSA DIST-  
 SUNDARGARH, ODISHA  
 SUNDARGARH ORISSA  
 Phone: 8895502356  
 FAX :

## Mining Engineer

Name : SHRI A K MISHRA, Full Time  
 Qualification : B TECH MINING  
 Appointment/ : 12-JAN-19  
 Termination date

## Geologist

Name : SHRI KARTIKEYA SHANKAR, Full Time  
 Qualification : MECH APPLIED GEOLOGY  
 Appointment/ : 24-APR-21  
 Termination date

## Manager

Name : SHRI JOGESHWAR BADAIAK  
 Qualification : Diploma in Mining Engg & FCC  
 Appointment/ : 27-SEP-17  
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining : Modif.of approved Mining Plan 21-JUN-13  
 MP modif under 17(3) MCR 2016 29-MAR-19

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Nil	
1b	Exploration over lease area for geological axis 1 or 2	162.401 Ha has been explored under G1 level	Balance area 174.069 Ha. to be explored as per statute.	Violation letter issued for sortfall of exploration in the year 2021-22.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	M/s. GemcokatiExpl . Pvt.Ltd. Total budget is Rs. 1586.41 Lakh (for entire Lease)	Nil	Not commenced due to COVID situation
1d	Balance area to be explored to bring Geological axis in 1 or 2	174.069 Ha. to be explored under G1 category.	Nil	
1e	Balance reserve as on 01/04/20	As per approved Modified Mining Plan dated 01.04.2021, the total reservre & resource of mine as on 31.10.2020 are 96.007 Mt & 25.739 Mt. respectively	As per approved Modified Mining Plan dated 01.04.2021, the total reservre & resource of mine as on 31.10.2020 are 96.007 Mt & 25.739 Mt. respectively	
1f	General remarks of inspecting officers on geology, exploration etc			Violation letter has been issued under rule MCDR, 2017 for non-compliance of exploration proposal.

## Development :

Sl.No.	Item	Propasals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	2021:22: Block-A: 315000E to 315400 E,2430400 N to 2431150 N Block-C: 316550 E to 317250 E, 2432450 N to 2433300 N	2021:22: Block-A: 315000E to 315400 E,2430400 N to 2431150 N Block-C: 316550 E to 317250 E, 2432450 N to 2433300 N	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	2021-22: Block-A: Topsoil- no benches Overburden- 8 Mineral- 8 Block-C: Topsoil- no benches Overburden- 4 Mineral- 4	2021-22: Block-A: Topsoil- no benches Overburden- 8 Mineral- 8 Block-C: Topsoil- no benches Overburden- 4 Mineral- 4	
2c	Stripping ratio or ore to OB ratio	1:0.042	1:0.037	
2d	Quantity of topsoil generation in m3	2021-22: Block-A:5600 Block-C:3540	Nil	No top soil generaetd during the year 2021-22 due to no work was carried out in concerned proposed pit.
2e	Quantity of overburden generation in m3	143830 cubic metre	116089 cubic metre	Less ROM production caused less overburden generation during the year.

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2 nos. Block-A &Block	2 nos. Block-A &Block	
3b	Quantity of ROM mineral production proposed	2021-22 : 3493254 T	2021-22 : 3168400 T	
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	

3d	Quantity of mineral reject generation	2021-22: 251805T	Nil	No mineral generation due to 100% recovery.
3e	Grade of mineral rejects generation and threshold value declared.	Grade: Fe >45 to <57% Threshold: Fe 45%	Grade: Fe >45 to <57% Threshold: Fe 45%	
3f	Quantity of sub grade mineral generation.	2021-22: 251805 T	Nil	
3g	Grade of sub grade mineral generation	45-57% Fe	45-57% Fe	No sugrade mineral was generated during the year
3h	Manual / Mechanised method adopted for segregating from ROM	Manual & Mechanised	Manual & Mechanised	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Proposed	Screening of subgrade materials carried out in departmental laboratory. The +10mm lump recovery varying between 30 to 40% with a quality of 52 to 55% Fe.	
3j	Provision of drilling and blasting in mineral benches	Drilling & Blasting are proposed in mineral benches	Blast hole diameter: 150mm Blasting is done by using ANFO and slurry explosives with NONEL. Burden: 4m Spacing: 6m	
3k	Provision of mining machineries in mineral benches	mining machineries in mineral benches were proposed	mining machineries in mineral benches have been deployed	Excavator Bucket Capacity: 1.8-2.5m <sup>3</sup> Dumper Capacity: 35T
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	6 m Bench Height is proposed	6 m Bench Height is maintained	
3m	Total area covered under excavation/pits	116.500 ha.	116.500 ha.	
3n	Ore to OB ratio for the pit/mine during the year.	1:0.36	1:0.0769	

3o	Total area put in use under different heads at the end of year	179.684 Ha.	179.684 Ha.	
3p	Production of ROM mineral during the last five year period as applicable	2017-18: 2.6 MT 2018-19: 2.6 MT 2019-20: 2.6 MT 2020-21: 3.2 MT 2021-22: 3.5 MT	2017-18: 1.50M T. 2018-19: 1.72M T. 2019-20: 1.87M T. 2020-21: 2.50M T. 2021-22: 3.17M T	
3q	General remarks of inspecting officers on method of mining etc.			Exploitation has been carried out as per approved proposal.

#### Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping was prosed	Separate dumping ofOB & mineral reject have been made.	
4b	Location of topsoil, OB and mineral reject dumps	Waste Dump KWD-11: 316579E- 316920E; 24131977N- 2432419N; Mineral Reject Dumps KSD-10; 314830E- 315140E;243031 ON-2430615N	Waste Dump KWD-11: 316579E-316920E; 24131977N-2432419N; Mineral Reject Dumps KSD-10; 314830E- 315140E;2430310N- 2430615N	
4c	Number of dumps within lease area and outside of lease area	Waste Dump: 1 no. Mineral Reject Dump: 8 nos.	Waste Dump: 1 no. Mineral Reject Dump: 8 nos.	All waste dump and mineral reject dumps are within Lease area
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Waste dump is outside UPL & subgrade dumps are within UPL	Waste dump is outside UPL & subgrade dumps are within UPL	

4e	Number of active and alive dumps.	Waste Dump: 1 no. (KWD-11) Mineral reject dump: 1 no. (KSD-10)	Waste Dump: 1 no. (KWD-11) Mineral reject dump: 1 no. (KSD-10)	
4f	Number of dead dumps.	No proposal	NIL	
4g	Number of dumps established.	No proposal	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal during the year 2021-22	Nil	
4i	Length of Retaining wall or garland drain all along dumps	No proposal during the year	Nil	
4j	Number of settling ponds	No proposal during the year	Nil	
4k	Specific comments of inspecting officer on waste dump management			All waste dump and mineral reject dumps are within Lease area

#### 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.	No proposal during the year	Nil	
5b	Area under backfilling of mined out area	No proposal during the year	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal during the year	Nil	
5d	Total area fully reclaimed and rehabilitated	No proposal during the year	Nil	

5e	General remarks of inspecting officers on backfilling and reclamation etc.	No mining area matured for backfilling. Backfilling is proposed after complete extraction of ore.
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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).	Proposed	Submitted in time for 2020-21 & report thereon for 2021-22 was not due.	
6b	Area available for rehabilitation (ha) .	No proposal	Nil	
6c	afforestation done (ha).	No proposal	Nil	
6d	No. of saplings planted during the year	No proposal	Nil	
6e	Cumulative no .of plants	-	50000 Nos of sapplings	
6f	Any other method of rehabilitation	Not propsed	Nil	
6g	Cost incurred on watch and care during the year	No proposal	Nil	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	No proposal	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal	Nil	



6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	No proposal	Nil	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	No proposal	Nil	
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	No proposal	Nil	10000 nos. of sapplings have been planted outside the lease area
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	No proposal	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	No proposal during the year	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring of AAQ, Water Quality and Noise Level were proposed	Monthly and Quarterly monitoring of AAQ, Water Quality and Noise Level are being carried out.	

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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	Mineral Reject stacked in specified stack within the lease area was proposed	Mineral Reject stacked in specified stack within the lease area are being carried out.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical & Manual >57% Fe	Mechanical & Manual >57% Fe	Mechanical & Manual >57% Fe feed to crusher and partly subgrade materials/mineral reject blended with high grade ore and partly stacked in SG Dump/Stack
7c	Different grade of mineral sorted out at mines.	45 - 57% Fe at Dump / Stack	45 - 57% Fe at Dump / Stack	Mineral reject stacked in specified stack in subgrade stack KSD-10
7d	Any beneficiation process at mines .	No beneficiation proposed for the year 2021-22	Nil	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Kalta Iron Mine is a captive mine of M/s SAIL and the ore is used for extraction of Iron & Steel from different steel plants of SAIL

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**Environment:**

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	Nil	Present area of excavation under existing pits, where the topsoil are not available
8b	Concurrent use or storage of topsoil	No proposal	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Waste dump: KWD-11 Mineral reject dump: KSD-10	Waste dump: KWD-11 Mineral reject dump: KSD-10	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	N oproposal	Nil	Overburden and waste rock will be used for restoring the land after completion of the excavation of ore from pits.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Nil	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	No proposal	Nil	However, 10000 nos. of sappling have been planted outside the lease area during the year
8g	Survival rate	80%	78%	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on roads to control airborne dust was proposed	Permanent sprinkling system is installed in haulage road and water tanker also routinely used.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Overburden and waste rock will be used for restoring the land to its original status after completion of the excavation of ore from pits.

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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly Return Submitted upto March-2022 Annual Return Submitted upto the year 2020-21	Annual Return is not due for submission for year 2021-22	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information on Mining engineer, Geologist and Manager of the mine has been furnished.	Found in order	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area covered under excavation: 116.500 Ha	found in order	
9d	Scrutiny of Annual return on afforestation	10000 nos. sapplings in 4.0 Ha. Planted in 2020-21.	10000 nos. sapplings in 4.0 Ha. Planted in 2020-21 outsidee the lease area	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Details are furnished	Mineral Reject generated during the year 2020-21 was 31900 tonnes with 45 to 57% Fe.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Details are provided	ROM production in 2020-21 : 2496900 Tonnes and Closing stock is 0 Tonne	Mineral Reject generated during the year 2020-21 was 31900 tonnes with 45 to 57% Fe.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Details are given	Production cost is Rs. 2065.54/- per Tonne	
9h	Scrutiny of Annual return on fixed assets	Details are given	Value of fixed asset is Rs. 85436321/-	
9k	Scrutiny of Annual return on mining machineries	Details given	Back Hoe : 08 Nos. Dumper : 29 Nos Front End Loader : 11 Nos. Water Tanker : 06 nos. Rock Drill : 01 Nos.	

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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 11(1)	29-APR-22			

**Date :**

**(RAJANI KANTA RAUTARAY)**

Indian Bureau of Mines