

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

**MCDR inspection REPORT**

**Bhubaneshwar regional office**

**Mine file No :** ORI/IRON/SNG/MCDR-21/BBS

**Mine code :** 30ORI13053

- (i) Name of the Inspecting : **RKR5** ) **RAJANI KANTA RAUTARAY**  
Officer and ID No.
- (ii) Designation : Assistant Mining Engineer
- (iii) Accompanying mine : Sh. P C Barua, 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** : **TALDIH(1173.484 HA)**
- (b) **Registration NO.** : **IBM/5662/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **ORISSA**
- District : **SUNDARGARH**
- Village :
- Taluka :
- Post office :
- Pin Code :
- FAX No. : **06625-236031**
- E-mail : **gmbimsail@yahoo.co.in**
- Phone : **06625-236026**
- (f) **Police Station** : **Lahunipara**
- (g) **First opening date** :
- (h) **Weekly day of rest** : **SUN**
2. **Address for correspondance** : **TALDIH IRON ORE MINE, M/S SAIL**  
**SUNDERGARH DISTRICT**  
**ORISSA**
3. (a) **Lease Number** :
- (b) **Lease area** :
- (c) **Period of lease** :
- (d) **Date of Expiry** :
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 S K PARIDA, Full Time  
 Qualification : DIPLOMA IN MINING ENGG  
 Appointment/ : 04-JUL-16  
 Termination date

## Geologist

Name : SHRI MANOJ KUMAR MAJHI, Full Time  
 Qualification : MSC TEC (APPLIED GEOLOGY)  
 Appointment/ : 29-MAR-21  
 Termination date

## Manager

Name : SHRI P C BARUA  
 Qualification : B TECH MINING  
 Appointment/ : 28-MAR-16  
 Termination date

6. Date of approval of Mining :  
 Plan/Scheme of Mining

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	21 Nos. of holes were proposed to drill under G1 category	Nil	
1b	Exploration over lease area for geological axis 1 or 2	-	428.476 Ha.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	M/s. Mining Associates Pvt. Ltd. Total budget is Rs. 194.27 Lakh M/s. Gemcokati Expl. Pvt.Ltd. Total budget is Rs. 1586.41 Lakh (for entire Lease)	M/s. Mining Associates Pvt. Ltd. Total budget is Rs. 194.27 Lakh M/s. Gemcokati Expl. Pvt.Ltd. Yet to be completed. The drilling is under progress.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	745.008 ha.	555.108 ha.	The exploration work for the remaining 189.900 Ha area is going on.
1e	Balance reserve as on 01/04/20		As per Modified Mining Plan dated 01.04.2021, the reserve & resource as on 31.10.2020 is 328.262 Mt & 59.062 Mt respectively.	
1f	General remarks of inspecting officers on geology, exploration etc			The potential mining lease area has been explored under G1 level of exploration.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t. lease area	A Block: 2422900N to 2423300N 309400E to 309750E C Block: 2424000N to 2424500N 310000E to 310300E	A Block: 2423050N to 2423258N 309400E to 309740E C Block: 2424130N to 2424480N 310100E to 310250E	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	A Block: Topsoil- no benches Overburden- 9 bench Mineral- 7 benches C Block: Topsoil- no benches Overburden- 3 benches Mineral- 3 benches	A Block: Topsoil- no benches Overburden- 9 bench Mineral- 7 benches C Block: Topsoil- no benches Overburden- 3 benches Mineral- 3 benches	
2c	Stripping ratio or ore to OB ratio	1:0.175	1:0.583	
2d	Quantity of topsoil generation in m3	C Block: 31700 cubic metre	Nil	No top soil generated in 2020-21 & 2021-22
2e	Quantity of overburden generation in m3	325100 cubic metre	314200 cubic metre	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			

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**Exploitation:**

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2021-22: 2 nos., A Block & C Block	2021-22: 2 nos., A Block & C Block	
3b	Quantity of ROM mineral production proposed	2021-22: 2043782 T	2021-22: 1253950 T	EC quantity 1.35 MT for the year 2020-21 & 2021-22.

3c	Recovery of sailable/usable mineral from ROM production	77.48%	100%	Less subgrade materials generated during actual excavation area, so proportion of usable ore increased.
3d	Quantity of mineral reject generation	2021-22: 460292 T	Nil	No mineral generation during the year 2021-22
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: 460292 T	Nil	Less subgrade materials generated during actual excavation area.
3g	Grade of sub grade mineral generation	45-57% Fe	45-57% Fe	
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.	Proposed	Fe varying from 45 to 57 %	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	Provision of drilling & blasting in mineral benches has been proposed	Blast hole diameter: 100mm Blasting is done by using ANFO and slurry explosives with NONEL. Burden: 2.5m Spacing: 3.5m	
3k	Provision of mining machineries in mineral benches	mining machineries in mineral benches has been proposed	Excavator Bucket Capacity: 2.5m <sup>3</sup> , 1.8m <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	14.12 Ha.	14.12 Ha.	
3p	Production of ROM mineral during the last five year period as applicable	2017-18: 1.64 MT 2018-19: 1.89 MT 2019-20: 2.05 MT 2020-21: 1.35 MT 2021-22: 2.05 MT	2017-18 : 0.80 MT 2018-19 : 0.33 MT 2019-20 : 1.16 MT 2020-21 : 1.24 MT 2021-22 : 1.25 MT	Less production due to delay in hand over of the area from forest department, delay in infrastructure development and quality of the top benches and EC restriction.
3q	General remarks of inspecting officers on method of mining etc.			Less production due to delay in hand over of the area from forest department, delay in infrastructure development and quality of the top benches and EC restriction.

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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)	Separate dumping has been proposed	Dumping of mineral reject in TSD- 1 and dumping of waste in TWD- 2	No topsoil generation is proposed
4b	Location of topsoil, OB and mineral reject dumps	TWD-2 In 'C' Block 2424131N to 2424730N 310542E to 311070E  TSD-1 In 'A' Block 2423150N to 2423350N 309730E to 309930E	TWD-2 In 'C' Block 2424131N to 2424730N 310542E to 311070E  TSD-1 In 'A' Block 2423150N to 2423350N 309730E to 309930E	Dumping in TWD-2 started in 2020-21

4c	Number of dumps within lease area and outside of lease area	All waste dump and mineral reject dumps are within Lease area Waste Dump: 1 no. Mineral Reject Dump: 1 no.	All waste dump and mineral reject dumps are within Lease area Waste Dump: 1 no. Mineral Reject Dump: 1 no.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	TSD-1 within ultimate pit limit TWD-2 outside ultimate pit limit	TSD-1 within ultimate pit limit TWD-2 outside ultimate pit limit	TSD-1 is temporary
4e	Number of active and alive dumps.	Waste Dump: 1 no. Mineral reject dump: 1 no.	Waste Dump: 1 no. Mineral reject dump: 1 no.	
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.	Proposed during the year 2021-22	Construction of Retaining wall or garland drain is going on.	
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall : 1390 metre Garlan Drain : 1450 metre	Retaining wall : 1060 metre Garlan Drain : 850 metre	violation letter issued for non compliance of protective measures under MCDR, 2017.
4j	Number of settling ponds	05 Nos.	03 Nos.	
4k	Specific comments of inspecting officer on waste dump management			Vioalation letter issued under rule 11 (1) of MCDR, 2017 for not achieving the protective measures along the waste dump.

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Solid Waste Management - Backfilling:

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Sl.No.	Item	Propasals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No proposal	Nil	
5b	Area under backfilling of mined out area	No proposal	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	Nil	
5d	Total area fully reclaimed and rehabilitated	No proposal	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Taldih mine has started in 2016-17, no area matured for reclaimed & rehabilitation & backfilling

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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).	Annual report on PMCP has been proposed	As per rule 26(2) of MCDR, 2017 Annual report on PMCP has been submitted in time.	
6b	Area available for rehabilitation (ha) .	No proposal	Nil	At present no area available for rehabilitation and afforestation
6c	afforestation done (ha) .	No proposal	NIL	At present no area available for rehabilitation and afforestation
6d	No. of saplings planted during the year	No proposal	Nil	



6e	Cumulative no .of plants	No prposal	Nil	Taldih mine has started in 2016-17, no area available for rehabilitation and afforestation
6f	Any other method of rehabilitation	No proposal	Nil	
6g	Cost incurred on watch and care during the year	Not proposed	Nil	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	No such proposal during the year	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No such proposal during the year	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No such proposal during the year	Nil	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No such proposal during the year	Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No such proposal during the year	Nil	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	Nil	

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No such proposal during the year	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No such proposal during the year	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring of AAQ, Water Quality and Noise Level to be carried out through a recognized environmental consultant.	Monthly and Quarterly monitoring of AAQ, Water Quality and Noise Level are being carried out.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Taldih mine has started in 2016-17, at present no area is available for rehabilitation and reclamation.

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#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Mineral Reject stacked in specified stack within the lease area.	Mineral Reject stacked in specified stack within the lease area.	Taldih 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.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	Mechanical, >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 Stack	Mineral reject stacked in specified stack in subgrade stack
7d	Any beneficiation process at mines .	No beneficiation proposed for the year 2020-21 & 2021-22	Nil	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Taldih 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.

#### Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	Nil	
8b	Concurrent use or storage of topsoil	No proposal	Nil	No topsoil generation during the year
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping for waste and mineral reject was proposed	Dumping of mineral reject in TSD- 1 and overburden in TWD-2	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal for the year 2021-22	Nil	

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	No proposal	Nil	
8g	Survival rate	Not proposed	Nil	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling tanker will be routinely used in haulage road for dust control.	Water sprinkling tanker is routinely used in haulage road for dust control.	
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 use after completion of the excavation of ore from pits.

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Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly Return and Annual return have been submitted in time.	Monthly Return Submitted upto March, 2022 Annual return Submitted upto financial 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: 14.12 Ha; Used for waste disposal: 1.50 ha. Infrastructure : 16.75 ha. Retaining wall: 1.00 Ha; Other: 4.50 ha.	Found in order	

9d	Scrutiny of Annual return on afforestation	No proposal	Nil	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Mineral Reject generated during the year 2020-21 was 121600 tonnes with 45 to 57% Fe	Found in order	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing stock of ROM furnished is nil.	Closing stock of ROM furnished is nil.	Taldih 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.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Production cost for lump & fines Rs.1472.45/- per Tonne	Found in order	
9h	Scrutiny of Annual return on fixed assets	Details provided	Found in order	
9k	Scrutiny of Annual return on mining machineries	Details submitted on mining machineries	Back Hoe : 03 Nos. (2.3 Cum) Front End Loader : 01 No. (2.5 Cum) Tipper : : 07 Nos. (25 Cum) Rock Drill : 01 No Dozer : 01 No. Found in order as per proposal	

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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