

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

MCDR INSPECTION REPORT

Gandhinagar regional office

Mine file No : RAJ/RJS/LZ-1

Mine code : 34RAJ27002

- (i) Name of the Inspecting : **G021**) **DATA RAM GURJAR**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Sh. Dushyant Tailor, Mining Engineer, and Shri Pankaj
Official with
Designation
- (iv) Date of Inspection : 16-NOV-18
- (v) Prev.inspection date : 17-JUL-18

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **SINDESAR KHURD**
- (b) **Registration NO.** : **IBM/421/2011**
- (c) **Category** : **A Mechanised**
- (d) **Type of Working** : **Underground**
- (e) **Postal address**
- State : **RAJASTHAN**
- District : **RAJSAMAND**
- Village : **SINDSAR KHURD**
- Taluka : **RAIL MAGRA**
- Post office : **DARIBA**
- Pin Code : **313211**
- FAX No. : **02952-265143**
- E-mail : **sunil.duggal@vedanta.co.in**
- Phone : **02952-265275**
- (f) **Police Station** : **Dariba**
- (g) **First opening date** : **09-AUG-00**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **RAJSAMAND**
correspondance : **Tehsil - Railmagra**
: **Rajasthan**
3. (a) **Lease Number** : **RAJ1749**
- (b) **Lease area** : **199.84**
- (c) **Period of lease** : **30**
- (d) **Date of Expiry** : **19-MAR-29**
4. **Mineral worked** : **LEAD & ZINC ORE** **Main**

5. Name and Address of the

Lessee : Hindustan Zinc Ltd.
Yashad Bhavan Udaipur
UDAIPUR RAJASTHAN
Phone:
FAX :

Owner : SUNIL DUGGAL
YASHAD BHAWAN UDAIPUR
UDAIPUR RAJASTHAN
Phone: 0294-6604120
FAX : 0294-6604120

Agent : Sanjay Kumar Sharma
Sindesar Khurd Lead Zinc
Mine Tehsil-Railmagra
RAJSAMAND RAJASTHAN
Phone: 8003097074
FAX :

Mining Engineer

Name : Dushyant Tailor, Full Time
Qualification : BE(Mining) & FCC(U/R)
Appointment/ : 12-JUL-18
Termination date

Mining Engineer

Name : RAM MURARI, Full Time
Qualification : BE (MINING)
Appointment/ : 15-NOV-14 11-JUL-18
Termination date

Geologist

Name : LALIT CHORDIA, Full Time
Qualification : MSC.(Geo.)
Appointment/ : 29-NOV-11 11-JUL-18
Termination date

Geologist

Name : Gaurav Mathur, Full Time
Qualification : MSC(Tech) Applied Geology
Appointment/ : 12-JUL-18
Termination date

Manager

Name : Sanath Kumar
Qualification : BE(Mining) & FCC(U/R)
Appointment/ : 09-JUL-18
Termination date

Manager

Name : SANJAY KUMAR SHARMA
Qualification : BE (MIN.)
Appointment/ : 23-JAN-14 08-JUL-18
Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	27-JUL-06
		Modif.of approved Mining Plan	29-JAN-09
		Mining Scheme rule 12 MCDR1988	23-JUL-13
		MP modif under 17(3) MCR 2016	01-DEC-17

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	None	None	
1b	Exploration over lease area for geological axis 1 or 2	2017-18-50000m No of BH-400 no's	2017-18-m No of BH-543 no's	78264
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Hindustan Zinc Limited & Transnational Drilling & Mining Associates Pvt. Ltd Expenditure- Not specified	Hindustan Zinc Limited & Transnational Drilling & Mining Associates Pvt. Ltd Expenditure- 2017-18- Rs 11,89,12,231/-	
1d	Balance area to be explored to bring Geological axis in 1 or 2	2017-18-50000m No of BH-400 no's	2017-18-m No of BH-543 no's	78264 It is U/G mine.
1e	Balance reserve as on 01/04/20	As on 01.04.18 total reserve 34 million tonnes	As on 01.04.18 total reserve 34 million tonnes	
1f	General remarks of inspecting officers on geology, exploration etc			During the year 2017-18 U/G exploration has been carried out as per proposal but surface exploration drilling has also been carried out during the year 2017-18 and current financial year but the intimation in Form I has not been submitted. Further records of surface drilling in Form J has also not been maintained hence violation of rule 47 & 48 of MCDR 2017 issued to the lessee.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	425-315mRL 290-215mRL 195-160mRL B BLOCK SKA2 SKA6 SKA08 SKA14 C BLOCK SKA11	425-315mRL 290-215mRL 195-160mRL B BLOCK SKA2 SKA6 SKA08 SKA14 C BLOCK	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Not proposed	U/G mines, hence not applicale	
2c	Stripping ratio or ore to OB ratio	Not proposed	U/G mines, hence not applicale	
2d	Quantity of topsoil generation in m3	Not proposed	U/G mine, hence not applicale	
2e	Quantity of overburden generation in m3	Not proposed	U/G mines, hence not applicale	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			During the year 2017-18 development was less than proposed, violation letter already issued based on previous inspection in this regard.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	425-315mRL, 290-215mRL, 130-15mRL, SKA02, SKA06, SKA8, SKA14, C BLOCK	425-315mRL, 290-215mRL, 130-15mRL, SKA02, SKA06, C BLOCK	
3b	Quantity of ROM mineral production proposed	2017-18 45,00,000MT	2017-18 45,00,000MT	

3c	Recovery of sailable/usable mineral from ROM production	2017-18 45,00,000MT	2017-18 45,00,000MT	
3d	Quantity of mineral reject generation	Not specified	2017-18 3977224 MT	Tailing Reject
3e	Grade of mineral rejects generation and threshold value declared.	Not specified	Grade of tailing reject Zn-0.23% Pb-0.14%	
3f	Quantity of sub grade mineral generation.	Not proposed	No subgrade mineral generated	
3g	Grade of sub grade mineral generation	Not applicale	Not applicable	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechnised method through Froth Flotation.	Mechnised method through Froth Flotation.	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	None	None	
3j	Provision of drilling and blasting in mineral benches	Blast hole stoping method with paste filling	Blast hole stoping method with paste filling	
3k	Provision of mining machineries in mineral benches	Trackless U/G mining using Dumpers, LHD, LPDT,Rock driller etc.	Trackless U/G mining using Dumpers, LHD, LPDT,Rock driller etc.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Not proposed	U/G mine, hence not applicable.	
3m	Total area covered under excavation/pits	U/G mine, hence not applicable.	U/G mine, hence not applicable.	
3n	Ore to OB ratio for the pit/mine during the year.	U/G mine, hence not applicable.	U/G mine, hence not applicable.	

3o	Total area put in use under different heads at the end of year	At the end of mining plan period total 121.89 hectare area will be used under different heads	At the end of year 2017-18 total area put to use 93.10 hectare under various heads.
3p	Production of ROM mineral during the last five year period as applicable	2013-14- 2000000MT 2014-15- 2000000MT 2015-16- 2500000MT 2016-17- 4500000MT 2017-18- 4500000MT 2018-19- 6000000MT	2013-14- 1723253MT 2014-15-1910055MT 2015-16-2969587MT 2016-17- 3664768MT 2017-18- 4500000MT 2018-19 till (31.10.18) 3024244 MT
3q	General remarks of inspecting officers on method of mining etc.		Method of mining is suitable to the deposit.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No proposal of top soil and OB generation.	It is U/G mine, hence there is not top soil. The waste generated during the U/G development is being disposed as per approved mining plan.	
4b	Location of topsoil, OB and mineral reject dumps	One waste dump on north side E/W 1296-1502 N/S 7134-7490	One waste dump on north side. E/W 1295-1494 N/S 7135-7490	Terracing of surface waste dump has not been carried our properly hence violation of rule 11(1) of MCDR 2017 issued to the lessee.
4c	Number of dumps within lease area and outside of lease area	01 waste dump.	01 waste dump.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	NA	It is U/G mine, hence not applicable.	

4e	Number of active and alive dumps.	One dump	One dump	
4f	Number of dead dumps.	Nil	Nil	
4g	Number of dumps established.	None	None	
4h	Whether Retaining wall or garland drain all along dumps are there.	Garland drain around the dump.	Garland drain around the dump.	
4i	Length of Retaining wall or garland drain all along dumps	Not specified.	NA	
4j	Number of settling ponds	None	None	
4k	Specific comments of inspecting officer on waste dump management			Terracing of surface waste dump has not been carried out properly hence violation of rule 11(1) of MCDR 2017 issued to the lessee.

Solid Waste Management - Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Backfilling proposed after full extraction of mineral.	Stopes were completely mined out before backfilling.	
5b	Area under backfilling of mined out area	1330000 cubic meter (backfilling of mined out stopes)	819057 cubic meter (backfilling of mined out stopes)	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not proposed	It is U/G mine, not applicable.	
5d	Total area fully reclaimed and rehabilitated	NA	It is U/G mine, hence not applicable.	

5e General remarks of inspecting officers on backfilling and reclamation etc. It is U/G mine backfilling &

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).	Yes	Yes	
6b	Area available for rehabilitation (ha) .	4 Ha	4 Ha	
6c	afforestation done (ha).	2 Ha	Nil, plantation done for gap filling only.	
6d	No. of saplings planted during the year	3000 nos.	2000 sapling planted for gap filling.	
6e	Cumulative no .of plants	No specific proposal.	1,00,000 nos. of plants.	
6f	Any other method of rehabilitation	NO specific proposal	It is U/G mine hence not applicable.	
6g	Cost incurred on watch and care during the year	No proposal	N/A	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	1500000 cubic meter(U/G stopes)	1677180 cubic meter	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	1330000 cubic meter	819057 cubic meter	

6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	No proposal	It is U/G mine, not applicable	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	It is U/G mine, not applicable	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	It is U/G mine, not applicable	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	2 hect	Nil, plantation done only for gap filling.	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	4 ha	4 ha	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	by plantation 3000 saplings	2000 sapling planted for gap filling.	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposal given for regular monitoring of air, noise and water	Regular monitoring of air, noise and water has been carried out.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Violation was already issued for less plantation during the year 2017-18 by the previous inspecting officer.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	2017-18 45,00,000MT	During the year 2017-18 total of 4500000 MT mineral was produced and dispatched to captive beneficiation plant within the lease area.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No garde wise sorting, whole ROM will beneficiated	Whole ROM is beneficiated.	
7c	Different grade of mineral sorted out at mines.	No proposal	Whole ROM is beneficiated.	
7d	Any beneficiation process at mines .	Yes	At present the ore produced at SK Mine is stacked at surface and fed to primary crusher after breaking the ore to optimum size using hydraulic breakers. The ore produced is processed by milling and sequential froth floatation to obtain lead and zinc concentrate.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			No issue related to mineral cosservation.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	It is U/G mine, hence not applicable.	
8b	Concurrent use or storage of topsoil	No proposal	It is U/G mine, hence not applicable.	

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposal is given for dumping of waste rock.	The waste generated from the mine development is brought on surface and dumped into earmarked place at surface. Few quantity of waste is used for backfilling of mined out stopes.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No specific proposals.	Used for filling in underground voids, stacking at waste dumps and mill tailing stacked at tailing dam.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No specific proposal	Being U/G mine not applicable.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Proposed 3000 saplings at 2 hectare area.	2000 sapling planted for gap filling.	
8g	Survival rate	80%	82%	
8h	Water sprinkling on roads to control airborne dust	Proposal given	Regular water sprinkling on the haul road for dust suppression.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty is good in and around the mines area.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	A.R. Submitted for the year 2017-18. Monthly return submitted up Nov. 2018.	A.R. Submitted for the year 2017-18. Monthly return submitted up Nov. 2018.	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Yes details given	Mining engineer: Sh. Ram Murari, Mine manager: Sh. Sanjay Kr. Sharma, Geologist: Sh. Lalit Chordia
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Details given	Discrepancy in annual return 2017-18 observed by previous inspecting officer and violation was already issued by the previous inspecting officer.
9d	Scrutiny of Annual return on afforestation	Details given	2000 sapling planted.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Details given	3977224 MT reject generated with following grade Zn-0.23% Pb-0.14%
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Detail given	ROM stock given
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Details given	Discrepancy in annual return 2017-18 observed by previous inspecting officer and violation was already issued by the previous inspecting officer.
9h	Scrutiny of Annual return on fixed assets	Details given	Discrepancy in annual return 2017-18 observed by previous inspecting officer and violation was already issued by the previous inspecting officer.
9k	Scrutiny of Annual return on mining machineries	Details given	Details of machineries given

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)	21-DEC-18				
MCDR17 Rule 46(a)	21-DEC-18				
MCDR17 Rule 47(a)	21-DEC-18				
MCDR17 Rule 48	21-DEC-18				

Date :

(DATA RAM GURJAR)

Indian Bureau of Mines