

**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. Sanath Kumar, Mine Manager & Sh. Dushyant Tailor,  
Official with  
Designation
- (iv) Date of Inspection : 16-MAR-19
- (v) Prev.inspection date : 16-NOV-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 correspondance** : **RAJSAMAND**  
**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	No backlog of previous year.	Not applicable.	
1b	Exploration over lease area for geological axis 1 or 2	2018-19-UG 85000.00m No of BH-800 no.s 2018-2019 Surface drilling 20000m, No of BH- 50no's	2018-19-UG Drilling (till 28.02.19) 86458.10m No of BH-537 no's 2018-2019 Surafce drilling (till 28.02.19) 13607.4m No of BH-22 no's	Violation of rule 11(1) of MCDR 2017 pointed out for shortfall in exploration.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Hindustan Zinc Limited Expenditure not specified.	Hindustan Zinc Limited 2018-19- Rs 3,70,731,904/-	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Proposal for year 2019-20 U/G-800 nos. Bore holes with 85000m Surafce: 25 nos. bore holes with 10000m.	N/A	
1e	Balance reserve as on 01/04/20	Balance reserves as on 01.04.2018 34mt	Balance reserves as on 01.04.2018 34mt	
1f	General remarks of inspecting officers on geology, exploration etc			Violation of rule 11(1) of MCDR 2017 pointed out for shortfall in exploration.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Ramp 425-315mRL 290-215mRL B & C BLOCK SKA2 SKA6 D Block E Block Vertical Dev	Ramp 425-315mRL 290-215mRL B & C BLOCK SKA2 SKA6 D Block E Block Vertical Dev	

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Not proposed	It is U/G mine, hence not applicable.
2c	Stripping ratio or ore to OB ratio	Not proposed	It is U/G mine, hence not applicable.
2d	Quantity of topsoil generation in m3	Not proposed	It is U/G mine, hence not applicable.
2e	Quantity of overburden generation in m3	Not proposed	It is U/G mine, hence not applicable.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		During the year 2018-19 development was less than the proposed, hence violation of rule 11(1) of MCDR 2017 has been pointed out.

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	425-315mRL, 290-215mRL, 130-15mRL, SKA2-(300-215mRL), SKA6,SKA14, C Block	425-315mRL, 290-215mRL, 130-15mRL, SKA2-(300-215mRL), SKA6,SKA14, C Block	
3b	Quantity of ROM mineral production proposed	2018-19: 6 million tonnes	2018-19: 4769686.00 tonnes (up to Feb 2019)	
3c	Recovery of sailable/usable mineral from ROM production	2018-19 60,00,000MT	2018-19 (till 28.02.19) 4769686.00 MT	
3d	Quantity of mineral reject generation	Not specified	Tailing reject generation 2018-19 (till 28.02.19) 4097001 MT	

3e	Grade of mineral rejects generation and threshold value declared.	Not specified	2018-19 (till 28.02.19) Pb-0.17% Zn-0.21%
3f	Quantity of sub grade mineral generation.	Not proposed	No subgrade mineral generation.
3g	Grade of sub grade mineral generation	Not proposed	Not applicable.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised method through Froth Flotation method	Mechanised method through Froth Flotation method
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's, LPDT's, Rock driller etc.	Trackless U/G mining using dumpers, LHD's, LPDT's, 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	Not proposed.	U/G mine, hence not applicable.
3n	Ore to OB ratio for the pit/mine during the year.	Not proposed.	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 2022-23 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 hect. 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- 4769686MT ( till 28.02.19)
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3q	General remarks of inspecting officers on method of mining etc.	Method of mining is suitable to the type of deposit.
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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 proposal of top soil and OB generation.	It is U/G mine , hence there is no top soil. The waste generated during the U/G mine development is being disposed in U/G voids as weel as surface dump.	
4b	Location of topsoil, OB and mineral reject dumps	Top soil, OB- Not proposed, Waste Dump location-E/W 1296-1502 N/S 7134-7490	Top soil, OB- Not proposed, Waste Dump location-E/W 1296-1502 N/S 7134-7490 & 7170N to 7380N & 1120E to 1250E	Waste dumping has also been carried out between grid 7170N to 7380N & 1120E to 1250E which was not proposed in the approved review of mining plan 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	One waste dump within lease area	Two waste dump within lease area.	Waste dumping has also been carried out between grid 7170N to 7380N & 1120E to 1250E which was not proposed in the approved review of mining plan hence violation of rule 11(1) of MCDR 2017 issued to the lessee.

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	N/A	It is U/G mine hence not applicable.	
4e	Number of active and alive dumps.	01	02	Waste dumping has also been carried out between grid 7170N to 7380N & 1120E to 1250E which was not proposed in the approved review of mining plan hence violation of rule 11(1) of MCDR 2017 issued to the lessee.
4f	Number of dead dumps.	Nil	Nil	
4g	Number of dumps established.	None	Not applicable	
4h	Whether Retaining wall or garland drain all along dumps are there.	Proposal of 200m parapet wall at the toe of waste dump and garland drain proposed.	Garland drain around the dump.	Construction of 200m parapet wall was proposed at the base of waste dump during the year 2018-19 but till inspection date no such wall has been constructed hence violation of rule 11(10) of MCDR 2017 pointed out.
4i	Length of Retaining wall or garland drain all along dumps	Proposal of 200m parapet wall at the toe of waste dump and garland drain proposed.	Garland drain around the dump.	Construction of 200m parapet wall was proposed at the base of waste dump during the year 2018-19 but till inspection date no such wall has been constructed hence violation of rule 11(10) of MCDR 2017 pointed out.
4j	Number of settling ponds	None	None	
4k	Specific comments of inspecting officer on waste dump management			Waste dumping during the year 2018-19 has not been carried out as per proposal hence violation of rule 11(1) of MCDR 2017 pointed out.



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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.	Backfilled propoded after full extraction of mineral.	Stope were completely mined out before backfilling.	
5b	Area under backfilling of mined out area	2018-19: 1330000 cubic meter	2018-2019 1016642 cubic meter( up to Feb. 2019)	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not proposed.	U/G mine, not applicable.	
5d	Total area fully reclaimed and rehabilitated	Not proposed.	U/G mine, not applicable.	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Backfilling has been carried out after full extraction of mineral fromU/G stopes.

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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).	Yes	Yes submitted for the year 2017-18 and PMCP report 2018-19 will be due on 01.07.2019.	
6b	Area available for rehabilitation (ha) .	4 Hect.(2018-19)	4 Hect. (2018-19)	
6c	afforestation done (ha).	2 Hect. (2018-19)	2 Hect.(2018-19)	
6d	No. of saplings planted during the year	3000 nos.	10600 Nos	

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6e	Cumulative no .of plants	Not specified	1,02,000 Nos
6f	Any other method of rehabilitation	No proposal	None
6g	Cost incurred on watch and care during the year	Not specified	N/A
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	1500000 cubic meter.(2018-19)	2017697 cubic meter( up to Feb 2019)
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	1330000 cubic meter(2018-19)	2018-19( up to 28.02.19) 1057003 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 Ha.	2 Ha.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	2 Ha.	2 Ha.

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	By Plantation	By Plantation	
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.			PMCP complinaces is satisfactory.

#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	2018-19: 6 million tonnes.	During the year 2018-19 total of 4769686 mineral was produced and disptched to captive beneficiation plant located within the lease area.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No grade wise sorting proposal given.	Whole ROM is beneficiated.	
7c	Different grade of mineral sorted out at mines.	No grade wise sorting proposal given.	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. Total 6.50mtpa capacity beneficiation plants is in operation at SK mine and the ore produced is processed by milling and sequential froth floatation to obtain lead and zinc concentrate here itself.	

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Whole ROM is beneficiated there is no subgrade mineral generation.
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## 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 rocks.	The waste generated from mine development is brought at the surface and dumped into earmarked place at surface. Few quantity of waste is being 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 proposal	Used for filling in U/G voids, stacting 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	It is U/g mine hence not applicable.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Proposed 3000 saplings at 2 Ha. area.	10600 sapling planted over an area 2 hect. & gap filling.	
8g	Survival rate	80%	82%	

8h	Water sprinkling on roads to control airborne dust	Proposal given	Regular water sprinkling on haul roads is being carried out for dust suppression.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty is good in and around mine area.

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#### Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted up to feb 2019, A.R. submitted for the year 2017-18.	M.R. Submitted up to feb 2019, A.R. submitted for the year 2017-18.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Yes, Detail given	Found in order.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Details given	Discrepancies observed.	Violation of rule 45(7) of MCDR 2017 pointed out during earlier inspection.
9d	Scrutiny of Annual return on afforestation	Details given	Found in order.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Detail given	3977224 tonnes tailing reject generated during the year 2017-18.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Detail given	Detail given	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Detail given.	Discrepancies observed.	Violation of rule 45(7) of MCDR 2017 pointed out during earlier inspection.

9h	Scrutiny of Annual return on fixed assets	Details given. Discrepancies observed.		Violation of rule 45(7) of MCDR 2017 pointed out during earlier inspection.
9k	Scrutiny of Annual return on mining machineries	Details of mine machineries given.	Details of mine machineries given.	

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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)	09-APR-19			

**Date :**

**(DATA RAM GURJAR)**

Indian Bureau of Mines