

**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 : **K018**) **DR A Z KHAN**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Shri Vignesh Kumar K, Mine Manager
Official with
Designation
- (iv) Date of Inspection : 19-OCT-23
- (v) Prev.inspection date : 20-APR-23

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 : 50
- (d) Date of Expiry : 19-MAR-49
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 : Sri Arun Mishra
 Yashad Bhavan, Udaipur
 Rajasthan UDAIPUR
 RAJASTHAN
 Phone:
 FAX : 0294-2412545

Agent : Vinod Jangir
 Sindesar Khurd Mine Distt.
 Rajsamand Rajasthan-313211
 RAJSAMAND RAJASTHAN
 Phone: 7742842411
 FAX : (02952) 265143

Mining Engineer

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

Geologist

Name : Shri Pankaj Kumar, Full Time
 Qualification : M.Sc. (Applied Geology)
 Appointment/ : 15-OCT-19
 Termination date

Manager

Name : Sri Srinivas Kammala
 Qualification : BE (Mining Engg)
 Appointment/ : 14-APR-22
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	10-JUL-02
		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
		MP modif under 17(3) MCR 2016	01-AUG-19
		MP modif under 17(3) MCR 2016	09-JUL-20
		MP review under 17(1) MCR 2016	31-MAR-23

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	A total of 95000 meters of drilling was proposed during previous year 2021-22	A total of 109807 meters of drilling has been carried out during previous year 2021-22.	No short fall in drilling meters during previous year.
1b	Exploration over lease area for geological axis 1 or 2	2022-23 UG Exploration Proposed 85000 m with No of BH-800 Surface Exploration 10000 m with No of BH-10	2022-23 UG Exploration done 75509 m with No of BH-402 2022-23 SF Exploration done 25097 m with No of BH-37	Violation of rule 11(1) of MCDR, 2017 was pointed out during previous inspection for shortfall in number of BHs.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No specific proposal about drilling agency and expenditure.	M/s Hindustan Zinc Limited through contractor (M/s NGG and M/s TDMA). Expenditure for Surface and UG exploration was Rs 320174478 /-(for UG Exploration Rs.204157725 /- & Surface Exploration Rs.116016753 /-	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	UG exploration- 7.3 Ha SF exploration- 7.0 Ha	To be explored for G1 & G2 level	Nil
1e	Balance reserve as on 01/04/20	As on 01.04.22 position of reserve & resource was 45.40 & 59.30 Million tons	As on 01.04.23 position of reserve & resource is 43.4 & 67.4 Million tons	Nil
1f	General remarks of inspecting officers on geology, exploration etc	2022-23 UG Exploration Proposed 85000 m with No of BH-800 Surface Exploration 10000 m with No of BH-10	2022-23 UG Exploration done 75509 m with No of BH-402 2022-23 SF Exploration done 25097 m with No of BH-37	Violation of rule 11(1) of MCDR, 2017 was pointed out during previous inspection for shortfall in number of BHs.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	A total of 30896 mts of development was proposed at various levels for Main Lens, SKA2, SKA11, SKA1, SKA6 Lens, D Block and E block.	During the RY, a total of 25112 mts of development has been achieved at various levels for Main Lens, SKA2, SKA8, SKA1, SKA6 SKA14, Lens, D Block and E block	Violation of rule 11(1) of MCDR, 2017 has been pointed out during previous inspection for less development.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No proposal	Not applicable as mining operation has been proposed through UG Mining Method	Nil
2c	Stripping ratio or ore to OB ratio	No proposal	Not applicable as mining operation has been proposed through UG Mining Method	Nil
2d	Quantity of topsoil generation in m3	No proposal	Not soil generation as mining operation has been proposed through UG Mining Method	Nil
2e	Quantity of overburden generation in m3	A total of 643172CuM/1800 882 tons of waste has been proposed to generate through UG development.	A total of 493711 CuM/1382392 tons of waste were generated through UG development.	Less waste generation due to less development. Violation of MCDR issued during previous inspection for less development.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Development has been proposed through UG method.	Development has been carried out inline with proposal.	The method of development proposed is suitable for the type of the deposit.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	No proposal	Not applicable as the production is proposed from the underground mining	Nil

3b	Quantity of ROM mineral production proposed	Proposal for the year 2022-23 was 6000000 MT	During the year production is 5598709 MT	
3c	Recovery of sailable/usable mineral from ROM production	Proposal for the year 2022-23 was 6000000 MT	During the year production is 5598709 MT	Nil
3d	Quantity of mineral reject generation	Proposal for Mineral Reject (mill tailing) generation was 5552711 Tons	A quantity of 5435794 tons (mill tailing) has been reported as mineral reject	Nil
3e	Grade of mineral rejects generation and threshold value declared.	No specific proposal & there is no threshold value declared	The grade of mil tailing was Zn-0.13% & Pb-0.17%	Nil
3f	Quantity of sub grade mineral generation.	No proposal of Sub-grade generation	No Sub-grade generation.	Entire ROM is subject to beneficiation
3g	Grade of sub grade mineral generation	No proposal	Not applicable as no proposal of sub-grade generation	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Froth Flotation method proposed	Froth Flotation method adopted for segregation during beneficiation	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal of any fresh beneficiation study	Beneficiation facility of 6.5MTPA is already in place	Beneficiation of ROM is being carried out as per proposal.
3j	Provision of drilling and blasting in mineral benches	Being UG no proposal for mineral bench. However proposal given for drilling & blasting in UG with Blast hole stoping method with post filling	Blast hole stoping method with post filling adopted in mine	Drilling and blasting have been carried out as per proposal in UG development and stopes.

3k	Provision of mining machineries in mineral benches	No proposal for mineral bench. In UG Dumper, Laud haul dumper, Rock Drills, Air Compressors, Blast Hole Drill Machine, Others (Non - Elec), Other HEM Machinery was proposed	Dumper, Laud haul dumper, Rock Drills, Air Compressors, Blast Hole Drill Machine, Others (Non - Elec), Other HEM Machinery being used in UG mining	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	No proposal	Not applicable being a UG mine	Nil
3m	Total area covered under excavation/pits	No proposal	Not applicable being a UG mine	Nil
3n	Ore to OB ratio for the pit/mine during the year.	No proposal	Not applicable being a UG mine	Nil
3o	Total area put in use under different heads at the end of year	Total area of 121.89 hectare has been proposed to put in use under different heads at the end of the year 2022-23.	An area of 120.98 has been utilized under different heads at the end of the year 2022-23.	Nil
3p	Production of ROM mineral during the last five year period as applicable	2018-19: 6000000 2019-20: 6000000 2020-21: 6000000 2021-22: 6000000 2022-23: 6000000	2018-19: 5310794 2019-20: 5077640 2020-21: 4842247 2021-22: 5230488 2022-23: 5598709	All figures in metric tons
3q	General remarks of inspecting officers on method of mining etc.	The Blast Hole Stopping with post filling (Paste Fill) method of Stopping (UG mining) has been proposed.	The Blast Hole Stopping with post filling (Paste Fill) method of Stopping (UG mining) has been carried out	The method of mining proposed is suitable for the type of the deposit and to recover maximum ore from the UG.

Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No proposal of topsoil generation/dumping. Waste is proposed to dispose in UG stopes voids as well as surface dumping. Mineral reject (Mill tailing) has been proposed to dispose in tailing dam.	Being UG mine Topsoil has not been generated during the reporting year. Waste and mill tailing has been disposed as per proposal.	Nil
4b	Location of topsoil, OB and mineral reject dumps	No proposal for Top soil, Waste is proposed to dispose in UG stopes voids and surface dumping in extension to existing waste dump (near boundary pillar G) & mineral reject (Mill tailing) in Tailing Dam	Waste disposed off in UG stopes voids and dumped on surface at the proposed location & mineral reject (Mill tailing) in Tailing Dam	Nil
4c	Number of dumps within lease area and outside of lease area	Within Lease area: 01 , Out Side Lease area-NIL	Within Lease area: 01 , Out Side Lease area-NIL	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Being UG mine proposal w.r.t. UPL	Not applicable as Mining operations are being carried out through UG mining method	Nil
4e	Number of active and alive dumps.	One active dump	One active dump within lease area.	Nil
4f	Number of dead dumps.	No proposal	There is not dead dump.	Nil
4g	Number of dumps established.	No proposal	There is no dead dump	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal for the year 2022-23	As there was no proposal no work done for retaining wall & Garland drain	Retaining wall and garland drain observed along the waste dump.
4i	Length of Retaining wall or garland drain all along dumps	No proposal	Not applicable	Nil

4j	Number of settling ponds	No proposal	Not applicable	Nil
4k	Specific comments of inspecting officer on waste dump management	Waste is proposed to dispose in UG stopes voids and surface dumping on existing waste dump.	Waste has been disposed off in UG stopes voids and surface dumping on existing waste dump	No issue related to waste dumping was observed during inspection

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.	Backfilling or waste dumping in UG voids has been proposed.	Dumping of waste has been carried out in UG stopes & backfilling by paste fill has been carried out	Nil
5b	Area under backfilling of mined out area	1850000 cum of UG mined out voids	A total of 1800459 cum of waste including tailing were disposed in UG voids	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal of topsoil generation during reporting year.	Being UG mine no topsoil has been generated during the year.	Nil
5d	Total area fully reclaimed and rehabilitated	No proposal of full reclamation and or rehabilitation	Not applicable as there was no proposal	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Backfilling or waste dumping in UG voids has been proposed.	Dumping of waste & backfilling of UG minedout void with paste fill has been carried out during the year	No issue related to backfilling observed

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).	As per rule 26(2) of MCDR, 2017, PMCP report to be submitted for previous year by 1st July.	Annual PMCP report for reporting year i.e., 2022-23 is submitted on 15/05/2023	Nil

6b	Area available for rehabilitation (ha) .	No proposal	Not applicable as there was no proposal	Nil
6c	afforestation done (ha).	Proposal was for 3.00 Ha	During the year afforestation done in 3.00 Ha	Nil
6d	No. of saplings planted during the year	3000 sapling was proposed	4850 sapling was planted	3000-fresh & 1850-Gap filling
6e	Cumulative no .of plants	No specific proposal was given	Cumulative no. of plants is 109350	Nil
6f	Any other method of rehabilitation	Other than plantation, no specific proposal of any other method of rehabilitation	Not applicable as there was no proposal	Nil
6g	Cost incurred on watch and care during the year	No specific proposal on cost of watch and care .	As reported, approximately Rs 1409250 cost incurred on watch & care	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	1850000 cum	1800459 cum	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	1850000 cum	1729583 cum	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	No proposal	Being UG mine not applicable	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Being UG mine not applicable	Nil

6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	Being UG mine not applicable	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	3000 saplings covering 3.0 ha	4850 sapling planted in 3.0 ha	3000-fresh & 1850-Gap filling
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	3.0 ha	3.0ha area rehabilitated by plantation	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Planation	Plantation	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposal of environment monitoring has been given	Environment monitoring is being carried out and parameters are found to be within permissible limit.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	An area of 3.0 hectare with 3000 number of saplings	A total of 3000 saplings have been planted in a area of 3.0 hectare. In addition to that 1850 saplings have been planted as a gap filling plantation.	No issue related to compliance of PMCP observed

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	No proposal for grade-wise sorting within lease area	Entire ROM ore is being transported to Ore beneficiation plant.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No proposal to grade wise sorting	Entire ROM ore is being transported to Ore beneficiation plant	Nil
7c	Different grade of mineral sorted out at mines.	No proposal for sorting	Entire ROM ore is being transported to Ore beneficiation plant	Nil

7d	Any beneficiation process at mines .	Currently Three beneficiation plants are in operation	Currently Three beneficiation plants are in operation with capacity of 3.0mtpa, 2.0mtpa & 1.50mtpa	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Benefication of ore was proposed	Entire ROM is beneficiated to get the concentrate.	No issue related to mineral conservation & beneficiation observed

Environment :

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	No proposal of topsoil generation	It is UG mine
8b	Concurrent use or storage of topsoil	No proposal	Not applicable as no proposal of top soil generation	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Waste from UG development proposed to dispose in UG stopes as well as surface dumping. No proposal for fines generation.	Fines have not been generated during the year. Waste has been disposed as per proposal.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No specific proposal	Waste rock used for filing in underground voids, stacking at waste dump yards and heightens of tailing dam	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Being UG mine there is no pit & dead dump for reclamation & rehabilitation.	Nil

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	An area of 3.0 hectare with 3000 number of saplings.	A total of 3000 saplings have been planted in a area of 3.0 hectare. In addition to that 1850 saplings have been planted as a gap filling plantation.	Nil
8g	Survival rate	90%	90%	Nil
8h	Water sprinkling on roads to control airborne dust	To control the air born dust particle, water sprinkling has been proposed over the roads by water tanke	Water sprinkling has been observed.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Waste proposed to dispose in stoped out area and surface dumping in extension of existing waste dump	Generated waste has been disposed as per proposal.	Aesthetic beauty in and around mine is satisfactory as the working is being carried out through UG mining method.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	As per rule 45 of MCDR, monthly and annual returns to be submitted.	Monthly & Annul returns have been submitted for the reporting year.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information on Mining Enginner, Geologist & Manager to be given by the lessee in Annual return	Mining Engineer- Dushyant Tailor Geologist-Pankaj Kumar Manager- Vignesh Kumar K	Mining Enginner, Geologist & Manager have been appointed
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use patter is given	Reclaimed/ rehabilitated-7.11, Occupied by plant, buildings,residential, welfare buildings & roads-67.560 Used for waste- 7.090 Work done under PMCP-3.0 hect. Used for mineral storage-36.220	Nil

9d	Scrutiny of Annual return on afforestation	Information on afforestation to be given	Information is given in Part V(5) of Annual return. Afforestation done in 3 Ha with 4850 saplings	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	There is no mineral reject as specified in Part V(3) of Annual Return	There is no mineral reject. Reject in the form of mill tailing generated	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Information is given under Part-VI(1) of Annual return	Found in Order	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	No sale of mineral only captive use of mineral. Ex Mine Price & Production cost is given as Rs.4954.99	Found in Order	Nil
9h	Scrutiny of Annual return on fixed assets	The information on fixed asset has been given	Details of fixed assets submitted in Annual Return . The Value of Fixed Assets: Rs. 48347916181/-	
9k	Scrutiny of Annual return on mining machineries	The detail information on mining machineries is given	The information furnished on mining machineries appears to be in order.	The discrepancy observed in some part of Annual Return for which show cause issued to lessee.

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
Rule 45(7)	06-DEC-23				

Date :

(DR A Z KHAN)

Indian Bureau of Mines