

**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 : **CB01**) **Sh. Chandresh Bohra**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Sh Anshul Khendalwal, Agent, Shri Srinivas Kammala, M
Official with
Designation
- (iv) Date of Inspection : 20-APR-23
- (v) Prev.inspection date : 22-DEC-22

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 achieved 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	A total of 812 BHs with 95000 mts of drilling was proposed during reporting year (RY) 2022-23.	A total of 439 BHs with 100606 mts of drilling was achieved during reporting year (RY) 2022-23.	Surface and UG exploration. Violation of rule 11(1) of MCDR, 2017 prepared 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.	Agency: M/s Hindustan Zinc Limited through contractor (M/s NGG and M/s TDMA). Expenditure Rs 320174478 /-	Surface and UG exploration.
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal of exploration for converting G3 level under G1/G2 level.	Not applicable.	NIL.
1e	Balance reserve as on 01/04/20	As on 01.04.21, the position of reserve and resource was 45.27 and 66.20 million tons respectively.	As on 01.04.23, the position of reserve and resource was 34.45 and 66.20 million tons respectively.	Depletion of 10.82 million tons for the year 2021-22 and 2022-23.
1f	General remarks of inspecting officers on geology, exploration etc	A total of 812 BHs with 95000 mts of drilling was proposed during reporting year (RY) 2022-23.	A total of 439 BHs with 100606 mts of drilling was achieved during reporting year (RY) 2022-23. Violation of MCDR, 2017 prepared for shortfall in number of BHs.	Geologically the area is complex. 3D modeling technique is being used for correlation of ore body etc.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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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 prepared for less development.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Not applicable as mining operation has been proposed through UG Mining Method.	Not applicable.	NIL.
2c	Stripping ratio or ore to OB ratio	Not applicable being a UG mine.	Not applicable.	NIL.
2d	Quantity of topsoil generation in m3	No proposal of topsoil generation during the RY.	No topsoil has been generated during the RY.	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 out of which 644189 MT was hauled to surface and remaining 738203 MT was dumped into underground stoping voids.	Less waste generation due to less development. Violation of MCDR issued 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.	As per 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	Not applicable as the production is proposed form the underground.	Not applicable.	NIL.
3b	Quantity of ROM mineral production proposed	6000000 Tons.	5598709 Tons.	NIL.

3c	Recovery of sailable/usable mineral from ROM production	6000000 Tons.	5598709 Tons.	NIL.
3d	Quantity of mineral reject generation	Mineral Reject generation (mill tailing)- 5552711 Tons.	Entire ROM is subject to beneficiation. 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.	The grade of mil tailing was 0.30 % (Pb+Zn).	NIL.
3f	Quantity of sub grade mineral generation.	No proposal of Sub-grade generation.	Not applicable.	NIL.
3g	Grade of sub grade mineral generation	Not applicable as no proposal of sub-grade generation.	Not applicable.	NIL.
3h	Manual / Mechanised method adopted for segregating from ROM	No proposal of segregation as entire ROM is subject to beneficiation.	Entire ROM is being beneficiated.	NIL.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal of any fresh beneficiation study. However, beneficiation facility of 6.5MTPA is already in place.	Beneficiation of ROM is being carried out as per proposal.	NIL.
3j	Provision of drilling and blasting in mineral benches	Drilling pattern for development in ore and rock-Burn Cut method. Drilling pattern in Stopes- Ring drilling with parallel hole drilling.	Drilling and blasting have been carried out as per proposal in UG development and stopes.	NIL.

3k	Provision of mining machineries in mineral benches	Dumper, Laud haul dumper, Rock Drills, Air Compressors, Blast Hole Drill Machine, Others (Non - Elec), Other HEM Machinery.	Dumper, Laud haul dumper, Rock Drills, Air Compressors, Blast Hole Drill Machine, Others (Non - Elec), Other HEM Machinery.	NIL.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Not applicable being a UG mine.	Not applicable.	NIL.
3m	Total area covered under excavation/pits	Not applicable being a UG mine.	Not applicable.	NIL.
3n	Ore to OB ratio for the pit/mine during the year.	Not applicable being a UG mine.	Not applicable.	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 Stoping with post filling (Paste Fill) method of Stoping (UG mining) has been proposed.	Method of mineral extraction as per proposal.	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	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No proposal of topsoil generation. 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.	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	Waste is proposed to dispose in UG stopes voids and surface dumping in extension to existing waste dump (near boundary pillar G).	Dumping of waste as per proposal.	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)	Not applicable as Mining operations are being carried out through UG mining method.	Not applicable.	NIL.
4e	Number of active and alive dumps.	One active dump near boundary pillar G.	One active dump near boundary pillar G.	NIL.
4f	Number of dead dumps.	No proposal.	Not applicable.	NIL.
4g	Number of dumps established.	No proposal.	Not applicable.	NIL.
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal.	Retaining wall and garland drain observed along the waste dump.	NIL.
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 in extension to existing waste dump.	As per proposal.	No issue related to waste dumping.

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.	NIL.
5b	Area under backfilling of mined out area	No specific proposal on area. However, 1850000 CuM of waste including tailing were proposed to backfill in UG voids.	A total of 1800459 cum of waste including tailing were disposed in UG voids.	Figures as reported during inspection.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal of topsoil generation during reporting year.	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.	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 has been carried out in UG stopes.	No issue related to backfilling.

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
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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 not yet due for submission.	NIL.
6b	Area available for rehabilitation (ha) .	No proposal.	Not applicable.	NIL.
6c	afforestation done (ha).	3.00 Ha	3.00 Ha	NIL.
6d	No. of saplings planted during the year	3000 saplings.	4850 saplings.	3000-fresh & 1850-Gap filling
6e	Cumulative no .of plants	No proposal.	109350 Saplings.	Figures as reported during inspection.
6f	Any other method of rehabilitation	Other than plantation, no specific proposal of any other method of rehabilitation	Not applicable.	NIL.
6g	Cost incurred on watch and care during the year	No specific proposal on cost of watch and care during the year.	As reported, approximately Rs 1409250	NIL.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No specific proposal.	Not applicable.	NIL.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	1850000 CuM of waste including tailing were proposed to backfill in UG voids.	A total of 1800459 cum of waste including tailing were disposed in UG voids.	Actual figures as reported during inspection.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	No proposal.	Not applicable.	NIL.

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal.	Not applicable.	NIL.
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal.	Not applicable.	NIL.
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	3000 saplings.	4850 saplings.	3000-fresh & 1850-Gap filling
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	3.00 Ha	3.00 Ha	NIL.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Plantation.	Plantation.	NIL.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Provision 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.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	No specific proposal of grade wise sorting.v	Entire ROM ore is being transported to Ore beneficiation plant.	NIL.

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Not applicable as no grade wise sorting.	Not applicable.	NIL.
7c	Different grade of mineral sorted out at mines.	No proposal.	Not applicable.	NIL.
7d	Any beneficiation process at mines .	A beneficiation plant of 6.5 MTPA has been installed within lease area.	Beneficiation plant having capacity of 6.5 MTPA is already in place. The process includes mainly crushing and grinding of ROM, Classification , differential flotation etc.	NIL.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No specific proposal.	Not applicable.	No issue related to mineral conservation.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal of topsoil generation.	Not applicable.	NIL.
8b	Concurrent use or storage of topsoil	Not applicable as no proposal of top soil generation.	Not applicable.	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 proposal.	Not applicable.	NIL.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal.	Not applicable.	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 tanker.	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 stopped 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 returns have been submitted for the reporting year. Annual return is yet not due for submission.	NIL.

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Annual return is yet not due for submission.	Not applicable as annual return is yet not due for submission.	NIL.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Annual return is yet not due for submission.	Not applicable as annual return is yet not due for submission.	NIL.
9d	Scrutiny of Annual return on afforestation	Annual return is yet not due for submission.	Not applicable as annual return is yet not due for submission.	NIL.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Annual return is yet not due for submission.	Not applicable as annual return is yet not due for submission.	NIL.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Annual return is yet not due for submission.	Not applicable as annual return is yet not due for submission.	NIL.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Annual return is yet not due for submission.	Not applicable as annual return is yet not due for submission.	NIL.
9h	Scrutiny of Annual return on fixed assets	Annual return is yet not due for submission.	Not applicable as annual return is yet not due for submission.	NIL.
9k	Scrutiny of Annual return on mining machineries	Annual return is yet not due for submission.	Not applicable as annual return is yet not due for submission.	NIL.

Details of violations observed during current inspection and compliance position of violation pointed out

Violation observed		Show cause position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on

Date :

(Sh. Chandresh Bohra)

Indian Bureau of Mines