

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

MCDR INSPECTION REPORT

Ajmer regional office

Mine file No : RAJ/AJM-315/Pb.Zn-1

Mine code : 34RAJ01001

- (i) Name of the Inspecting : **G021**) **D R GURJAR**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Sh. Radharaman, Mine Manager & Sh. Vijendra Kashyap,
Official with
Designation
- (iv) Date of Inspection : 17-DEC-21
- (v) Prev.inspection date : 08-OCT-21

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KAYAR**
- (b) **Registration NO.** : **IBM/421/2011**
- (c) **Category** : A Fully Mechanised
- (d) **Type of Working** : Underground
- (e) **Postal address**
- State : RAJASTHAN
- District : AJMER
- Village : KAYAR
- Taluka : AJMER
- Post office : KAYAR
- Pin Code : 305023
- FAX No. : 0145-6626266
- E-mail : kastoor.meena@vedanta.co.in
- Phone : 0145-6626232
- (f) **Police Station** : Gegal
- (g) **First opening date** : 12-JAN-98
- (h) **Weekly day of rest** : SUN
2. **Address for correspondance** : M/S Hindustan Zinc Limited
Kayad Lead -Zinc Mine
Village: Kayad, Dist & Teshil : Ajmer
3. (a) **Lease Number** : RAJ1765
- (b) **Lease area** : 480.45
- (c) **Period of lease** : 50
- (d) **Date of Expiry** : 27-FEB-48
4. **Mineral worked** : LEAD & ZINC ORE Main

5. Name and Address of the

Lessee : HINDUSTAN ZINC LTD.
 HINDUSTAN ZINC LTD. YASHAD
 BHAWAN YASHADGARH, UDAIPUR
 UDAIPUR RAJASTHAN
 Phone:01483-23331, 23332
 FAX :01483-23073

Owner : Mr. Arun Mishra
 M/s Hindustan Zinc Ltd.
 Yeshad Bhawan,yashadgarh,
 P.O.Udaipur, UDAIPUR
 RAJASTHAN
 Phone: 0294-2427734
 FAX : 0294-2427734

Agent : Mr. Kastoor Meena
 Kayad Lead -Zinc Mine M/S
 Hindustan Zinc Limited ,
 Village: Kayad, Dist &
 Teshil : AJM AJMER
 RAJASTHAN
 Phone: 0145-6626230,
 FAX : 0145-6626230,

Mining Engineer
 Name : Mr. Anshul Khandelwal,Full Time
 Qualification : BE Mining
 Appointment/ : 29-JUN-20 31-MAY-21
 Termination date

Mining Engineer
 Name : Manish Kameraia,Full Time
 Qualification : B Tech Mining
 Appointment/ : 01-NOV-21
 Termination date

Mining Engineer
 Name : Sh. Manmohan Katre,Full Time
 Qualification : B.Tech- Mining
 Appointment/ : 01-JUN-21 01-NOV-21
 Termination date

Geologist
 Name : Sri Vijendra Kashyap,Full Time
 Qualification : M.Sc. Geology
 Appointment/ : 12-JUN-18
 Termination date

Manager
 Name : Mr. Anshul Khandelwal
 Qualification : BE mining
 Appointment/ : 29-JUN-20 25-MAY-21
 Termination date

Manager
 Name : Sh. Radha Raman

Qualification : BE. Mining
Appointment/ : 26-MAY-21
Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Modif.of approved Mining Plan	05-DEC-06
		Modif.of approved Mining Plan	07-MAY-13
		MP modif under MCR 1960	20-MAY-16
		MP modif under 17(3) MCR 2016	18-OCT-16
		MP modif under 17(3) MCR 2016	03-NOV-17
		MP modif under 17(3) MCR 2016	06-SEP-19
		MP review under 17(1) MCR 2016	25-JAN-21

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Total 120 boreholes with 42000 mts of drilling	Total 117 boreholes with 35728 mts of drilling	Backlogs of drilling mts incorporated in RMP approved on 25.01.2021
1b	Exploration over lease area for geological axis 1 or 2	Total 115 BHs with 42000 mts of drilling	Total 207 BHs with 44254 mts of drilling	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposals	The exploration was done by HZL through Drilling agency SOILTECH (INDIA) PVT LTD Plot no 119, subplot no 39, Ramtekdi industrial area Near sangam press Ramtekdi, Hadapsar, Pune 411013 Total expenditure Rs.- 2054.91 Lakh	The expenditure includes Underground, Surface drilling and Exploratory drive development in UG.
1d	Balance area to be explored to bring Geological axis in 1 or 2	60 Hect. area	60 Hect. area	NIL
1e	Balance reserve as on 01/04/20	As per approved RMP dated 25.01.2021, as on 01.04.2020 Reserves- 3.63Mt Resources- 1.9Mt	As on 01.04.2021 Reserves- 2.455 Mt Resources- 2.74 Mt	Total depletion in FY(2020-21) is 1.175Mt in reserves and Resources addition in FY(2020-21) is 0.84Mt
1f	General remarks of inspecting officers on geology, exploration etc			Kayad ore body is lensoildal in shape with pinching and swelling in nature. During the year 2020-21, exploration has been carried out more than proposals.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t. lease area	Block-3 Main Lens Eastern Fringe K1, Sland K18 lens	Block-3 Main Lens Eastern Fringe K1, and K18 lens	The development in S1 lens is postponed due to COVID-19 situation
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Not Applicable	Not Applicable	Nil
2c	Stripping ratio or ore to OB ratio	Not Applicable	Not Applicable	Nil
2d	Quantity of topsoil generation in m3	No proposal of top soil generation	242 Cubic meters of top soil removed during civil work	Concurrently used for garden development.
2e	Quantity of overburden generation in m3	Not Applicable	Not Applicable	Nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			The underground development has been carried out at different levels and the mechanism adopted for carrying out the mining operation in the lease area is best suited method for the type of deposit.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Not applicable	Not applicable	Nil
3b	Quantity of ROM mineral production proposed	1200000 MT	1174824 MT	Less production due to Covid-19 Pandemic
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	Whole ROM dispatch to Rampura-Agucha Lead-zinc mine of M/s HZL situated in Bhilwara

3d	Quantity of mineral reject generation	No proposal of mineral reject generation	Not applicable	NIL
3e	Grade of mineral rejects generation and threshold value declared.	No proposal	Not applicable	Nil
3f	Quantity of sub grade mineral generation.	No proposal	Not Applicable	NIL
3g	Grade of sub grade mineral generation	No proposal	Not Applicable	NIL
3h	Manual / Mechanised method adopted for segregating from ROM	No proposal	Not applicable	NIL
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	Not applicable	NIL
3j	Provision of drilling and blasting in mineral benches	No proposal	Not applicable	As mining operation has been carried out through UG mining method
3k	Provision of mining machineries in mineral benches	No proposal	Not applicable	As mining operation has been carried out through UG mining method
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	No proposal	Not applicable	As mining operation has been carried out through UG mining method
3m	Total area covered under excavation/pits	0.73 Hect.	0.73 Hect.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	Not Applicable	Not Applicable	As mining operation has been carried out through UG mining method.

3o	Total area put in use under different heads at the end of year	48.5 Hect. (as per approved RMP on 25.01.2021)	48.5 Hect.	NIL
3p	Production of ROM mineral during the last five year period as applicable	2016-17- 1000000 MT 2017-18- 1200000 MT 2018-19 - 1200000 MT 2019-20- 1200000 MT 2020-21- 1200000 MT 2021-22- 1200000 MT	2016-17- 1000000 MT 2017-18 - 1200000 MT 2018-19 - 1199592 MT 2019-20- 1139071 MT 2020-21- 1174824 MT 2021-22-561119(Till Nov 2021)	Nil
3q	General remarks of inspecting officers on method of mining etc.			The mining method is combination of Longitudinal and Transverse Long Hole Open stoping.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Top soil Dumping - NIL OB Dumping- NIL Waste Dump-1	Top soil - NIL OB- NIL Waste Dump-1	Temporary waste dump was at earmarked location.
4b	Location of topsoil, OB and mineral reject dumps	Top soil: No proposal Waste dumping: Near Diesel filling station Mineral reject dump: No proposal	Top soil: Nil Temporary waste dump was at marked place No mineral reject generation	NIL
4c	Number of dumps within lease area and outside of lease area	Inside lease Area Waste Dump-1 Outside lease Area Waste Dump-Nil	Inside lease Area Waste Dump-1 Outside lease Area Waste Dump-Nil	NIL
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Waste Dump Loaction 1403E-1535E & 1036N3-10389N	Waste Dump Loaction 1403E-1535E & 1036N3-10389N	Temporary waste dumping
4e	Number of active and alive dumps.	One	One	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	630 meter retaining wall constructed and maintained	NIL
4i	Length of Retaining wall or garland drain all along dumps	No proposal	Not applicable	630 meter retaining wall constructed and maintained around waste dumping
4j	Number of settling ponds	No proposal	Not applicable	NIL
4k	Specific comments of inspecting officer on waste dump management	Waste has been proposed to use in backfilling of mined out stopes	Waste utilised for backfilling in mined out stopes.	Waste dump is temporary and the complete waste generated from UG mining is utilised for backfilling in mined out stopes.

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 was proposed	Waste was dumped in the stope out area	NIL
5b	Area under backfilling of mined out area	750000 MT of waste was proposed (416667Cu.mtr)	727000 MT of waste was backfilled. (403889 Cu.mtr)	In-house Geration-290500MT Purchase from Outside: 436500MT
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	Not applicable	NIL
5d	Total area fully reclaimed and rehabilitated	No proposal	Not Applicable	As it is UG Mine
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Backfilling of mined out U/G stopes is being carried out.

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 01st July.	Report for the year 2020-21 was submitted	NIL
6b	Area available for rehabilitation (ha) .	3.5 Hect. has been proposed	3.5 Hect. has been planted	NIL
6c	afforestation done (ha).	3.5 Hect.	3.5 Hect.	NIL
6d	No. of saplings planted during the year	5000 nos.	Inside Lease Area: 4000nos. Outside Lease Area: 1000nos.	Violation has been issued by earlier inspecting officer vide dated 16.07.2021 for less tree plantation within lease area.
6e	Cumulative no .of plants	34600 nos.	40600 nos. up to year 2020-21.	NIL
6f	Any other method of rehabilitation	No proposal	Not applicable	NIL
6g	Cost incurred on watch and care during the year	No Proposal	Rs. 1708800	As reported during inspection.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	416667Cu.mtr	403889 Cu.mtr	NIL
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	750000 MT of waste was proposed	727000 MT of waste was backfilled	In-house Generation- 290500MT Purchase from Outside: 436500MT
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on 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	5000 No.	Inside Lease: 4000nos. Outside Lease: 1000nos.	Violation has been issued by earlier inspecting officer vide dated 16.07.2021 for less plantation within lease area
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	3.5 Hect	3.5 Hect	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)	Air, Noise, vibration and water quality testing to be done quarterly in proposed location.	Monitoring is being done as per proposals and found within limits.	NIL
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			PMCP compliance appears to be satisfactory.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Proposed to dispatch entire ROM to Rampura Agucha Mine for further processing	entire ROM dispatched to Rampura Agucha Mine for further processing	NIL
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No proposal	Not applicable	All ore dispatched to RA mine for processing
7c	Different grade of mineral sorted out at mines.	No Proposal	Not applicable	NIL
7d	Any beneficiation process at mines	No proposal	Not applicable	NIL
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Entire ROM dispatched to Rampura Agucha mine for further processing. So no proposal of beneficiation within lease area.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	242 cubic meter of top soil removed during civil work	Concurrently used for development of Garden in CRF Area.
8b	Concurrent use or storage of topsoil	No proposal	242 cubic meter of top soil removed during civil work	Concurrently used for development of Garden in CRF Area
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	OB-NIL Waste Dump-1 Reject-NIL	OB-NIL Waste Dump-1 Reject-NIL	NIL
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Waste has been proposed to backfilling in mined out stoped	waste utilised for backfilling in mined out stopes	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)	5000 no. sapling proposed	Inside Lease: 4000 plants Outside Lease:1000 plants	Violation has been issued by earlier inspecting officer vide dated 16.07.2021 for less plantation within lease area
8g	Survival rate	No proposal	90%	As per AR 2020-21
8h	Water sprinkling on roads to control airborne dust	Water sprinkling proposed on roads.	Water sprinkling on roads and Tarapaulin cover on mine's truck was observed.	NIL
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The aesthetic beauty in and around the mine is good.

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, 2017 monthly and annual return to be submitted	Monthly and annual returns has been submitted within time.	NIL
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information has been furnished.	Mine manager, Mining Engineer and mining geologist are appointed	NIL
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Total of 48.5 Hect. area has been furnished	The land use pattern furnished in the return appers to be correct	NIL

9d	Scrutiny of Annual return on afforestation	Inside Lease: 4000 plants Outside Lease:1000 plants	Found in order	NIL
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Furnished as nil	Mineral Reject has not been generated	NIL
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Rom closing stock at mine head- 10083 MT	The information found in order	NIL
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Some discrepecines observed reagrding of Cost of production by the previous inspection officer vide violation letter dated 16.07.2021 followed by show cause notice dated 07.10.2021. Lessee submitted revised annual return for the year 2020-21 now Cost of Production reported Rs. 3837.36 per tonne.	Appear to be corrected.	Nil
9h	Scrutiny of Annual return on fixed assets	Value of fixed assets furnished is Rs. 6017747068	Appears in order	NIL
9k	Scrutiny of Annual return on mining machineries	Details of mine machinery have been give.	Appears in order	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 :

(D R GURJAR)

Indian Bureau of Mines