

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

**MCDR INSPECTION REPORT**

**Ajmer regional office**

**Mine file No :** RAJ/BLW- 56 /PB,ZN-1/6/12/200:

**Mine code :** 34RAJ06001

- (i) Name of the Inspecting : **K010** ) **Kotriwal B.L.**  
Officer and ID No.
- (ii) Designation : Regional Controller Mines
- (iii) Accompanying mine : Sh. Rajeev Shrimali & Sh. Kishor Kumar, Mines Manage  
Official with  
Designation
- (iv) Date of Inspection : 24-AUG-16
- (v) Prev.inspection date :

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **RAMPURA AGUCHA**
- (b) **Registration NO.** :
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address  
State : RAJASTHAN  
District : BHILWARA  
Village : AGUCHA  
Taluka : HURDA  
Post office : AGUCHA  
Pin Code : 311029  
FAX No. : 01483-23073  
E-mail :  
Phone : 01483-23331, 23332
- (f) Police Station :
- (g) First opening date : 05-FEB-81
- (h) Weekly day of rest : MON
2. Address for : HINDUSTAN ZINC LTD.  
correspondance RAMPURA AGUCHA MINE,  
PO AGUCHA, BHILWARA
3. (a) Lease Number : RAJ0652  
(b) Lease area : 1200  
(c) Period of lease : 50  
(d) Date of Expiry : 12-MAR-30
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 : AKHILESH JOSHI  
 UDAIPUR RAJASTHAN  
 Phone:  
 FAX :

6. Date of approval of Mining	:	Existing rule 11 MCDR1988	25-JAN-93
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	15-MAY-97
		Mining Scheme rule 12 MCDR1988	06-JUN-01
		Modif.approved Mining Scheme	29-JUL-03
		Modif.approved Mining Scheme	17-SEP-03
		Mining Scheme rule 12 MCDR1988	27-FEB-06
		Modif.approved Mining Scheme	02-NOV-06
		Modif.of approved Mining Plan	04-MAY-09
		Mining Scheme rule 12 MCDR1988	11-JUL-12
		Modif.approved Mining Scheme	28-JUN-13
		Modif.approved Mining Scheme	09-APR-15

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Drilling of 6000 m from surface by 44 holes and definition drilling of 4000 m	Drilling of 4257.15 m and definition drilling of 3797 m was carried out.	Violation of rule 13(1) of MCDR, 1988 was pointed on 07.10.2016.
1b	Exploration over lease area for geological axis 1 or 2	6000m	Exploratory drilling 4257.15m has been carried out	Violation of rule of 13(1) of MCDR, 1988 has been issued on 07.10.2016 for shortfall.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Mining Associated Pvt. Ltd., Asansol, WB	Mining Associated Pvt. Ltd., Asansol, WB Expenditure Rs 700 lakh	
1d	Balance area to be explored to bring Geological axis in 1 or 2	NA	NA	
1e	Balance reserve as on 01/04/20	Nil	Reserves -51.1 million tonnes Resources 52.7 million tonnes	
1f	General remarks of inspecting officers on geology, exploration etc	--	--	Violation of rule 13(1) of MCDR, 1988 was issued on 07.10.2016 for shortfall in exploration.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	FW Cut back at 110mRL in HW 90mRL to 60 mRL The sump below 70mRL. The ultimate HW cut upto 120-110mRL	FW Cut back at 110mRL in HW 90mRL to 60 mRL The sump below 70mRL. The ultimate HW cut upto 120-110mRL. Driving 936.78 m, Cross Cutting/Foot wall Drives (barren) 8836.36 m, Raising 518.69 m, Shaft sinking 686.1m	

2b	Separate benches in topsoil, overburden and minerals (Rule 15)		Top soil - Nil O B- 36 Mineral-15	All the top soil generated has been utilised for revegetation purpose.
2c	Stripping ratio or ore to OB ratio	1:15.27	1:12.64	
2d	Quantity of topsoil generation in m3	Nil	So far 80480 m3	
2e	Quantity of overburden generation in m3	OB removal - 22442607 m3	OB removal - 24559552 m3	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			UG development is lower than planned.

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**Exploitation:**

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One	One	
3b	Quantity of ROM mineral production proposed	Total - 5300000 MT O/C - 3921000 MT U/G -1379000 MT	Total-4704724 MT O/C- 4481203 MT U/G- 223521 MT	From open cast mine production is higher than proposed in approved scheme of mining. The violation of rule 13(1) of MDR,1988 has been issued.
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	
3d	Quantity of mineral reject generation	Nil	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	Not applicable	Not applicable	
3f	Quantity of sub grade mineral generation.	Nil	Nil	

3g	Grade of sub grade mineral generation	Not applicable	Not applicable
3h	Manual / Mechanised method adopted for segregating from ROM	Not applicable	Not applicable
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No	No
3j	Provision of drilling and blasting in mineral benches	Drilling ; Depending upon the strata condition bench height and rock type , spacing and burden is being varird. A typical drill design is as under- Spacing and Burden Ore : 3.0X2.75m to 4.0m X 3m. Depth of hole; 11.0 to 12.0 m Drill pattern: Mostly staggered. Blasting : Atypical blast design parameters ; Primary Charge 500 gms emulsion booster(Ore) Column Charge: Site ixed emulsion(Bulk) Charge Length ; 66-70% of hole depth.	As per proposal drilling and blasting is being carried out.
3k	Provision of mining machineries in mineral benches	Ore is excavated by combination of hydraulic excavator and dumpers	Ore is excavated by combination of hydraulic excavator and dumpers

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	
3m	Total area covered under excavation/pits	Pit - 160.43 Ha	Pit 160.43 Ha	
3n	Ore to OB ratio for the pit/mine during the year.	1:15.27	1:12.64	
3o	Total area put in use under different heads at the end of year	Pit - 160.43 Ha Wate/rejct- 349.51Ha Others- 514.56Ha Total 1024.5 Ha	Pit-160.43Ha Waste/rejec-274.5ha Others 477.67Ha Toltal -923.26Ha	
3p	Production of ROM mineral during the last five year period as applicable	Year 2011-12 - 6050000 MT Year 2012-13 - 5960000 MT Year 2013-14 - 6000000 MT Year 2014-15 - 6000000 MT Year 2015-16 - 5300000 MT	Year 2011-12 - 5947081 MT Year 2012-13 - 6149424 MT Year 2013-14 - 5803852 MT Year 2014-15 - 5451320 MT Year 2015-16 - 4704635 MT	
3q	General remarks of inspecting officers on method of mining etc.	--	--	The total mineral production is anticipated to be less than planned for the year.

## 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)	As per approved scheme of mining it is proposed that the top soil available during regular mining activity will be stored separately and will be utilized for stabilization of waste dumps , slopes of tailing dam and to generate the green belt in surroundings waste and mine area. OB to be stacked separately at proposed waste dump location in 20m of lifts.	The top soil generated has been utilizes plantation purpose on the slope of crusher pad, non moving slope of waste dump and lining of tailing dam. Ob has been dumped at planned location as per approved scheme of mining.	
4b	Location of topsoil, OB and mineral reject dumps	OB: At 60, 80, & 100m lift between coordinatee (887,481) to (-385, 2692). Mineral reject- Nil	OB: At 60, 80, & 100m lift betwene coordinatee (887,481) to (-385, 2692). Mineral reject- Nil	OB has been dumped at planned loction as per approved scheme of mining.
4c	Number of dumps within lease area and outside of lease area	One Inside lease area.	One Inside lease area.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	North of pit coordinatee (887,481) to (-385, 2692)	North of pit coordinatee (887,481) to (-385, 2692)	
4e	Number of active and alive dumps.	One	One	
4f	Number of dead dumps.	None	None	
4g	Number of dumps established.		Part of differnt lifts of dump has been stabilised with plantation.	The non moving ends of dump is being stabilised.

4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	Yes	The retaining wall at the toe of OB dump is constructed along with garland drain.
4i	Length of Retaining wall or garland drain all along dumps	Garland drain (with retaining wall along it) is planned to construct all along the waste dump.	More than 8 Km of garland drain (with retaining wall along it) has been constructed.	The retaining wall at the toe of OB dump is constructed along with garland drain.
4j	Number of settling ponds	Nil	Nil	
4k	Specific comments of inspecting officer on waste dump management	---	---	Dumping of OB has been carried out as per the proposals.

#### 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.	Not applicable.	Not applicable.	
5b	Area under backfilling of mined out area	Not applicable	Not applicable.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Nil	The top soil generated has been utilizes plantation purpose on the slope of crusher pad, non moving slope of waste dump and lining of tailing dam.	
5d	Total area fully reclaimed and rehabilitated	Nil	Part of the matured waste dump has been reclaimed by soil capping and plantation. Toal 7100 saplings hve been planted during the year.	No reclamtion is possible till the mature area is available.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	---	---	Mined out area is not mature for reclamation.



## 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).	None	Annual report on PMCP has not been submitted on time.	Violation of rule 23F(2) of MCDR,1988 has been pointed out on 07.10.2016.
6b	Area available for rehabilitation (ha) .	Nil	Nil	
6c	afforestation done (ha).	4.7 Ha	4.7Ha	
6d	No. of saplings planted during the year	4700 saplings	7100 saplings have been planted.	
6e	Cumulative no .of plants	310900 saplings	320600 saplings	
6f	Any other method of rehabilitation	None	None	
6g	Cost incurred on watch and care during the year	Rs. 8.8 lakh	Rs. 10.22 lakh on watch and care has been spent.	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	Nil	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not applicable	Not applicable	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	4700 saplings	7100 saplings have been planted.	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NA	NA	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NA	NA	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	4700 saplings	7100 saplings have been planted.	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not applicable	Not applicable	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Nil	Nil	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	---	---	Violation of rule 23E(2) of MCDR,1988 has been issued on 07.10.2016.

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**Mineral Conservation:**


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Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Differnt grades of mineral stacked separately at PCH pad feed optimum grade to beneficiation plant.	Differnt grades of mineral stacked separately at PCH pad feed optimum grade to beneficiation plant.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Ore and OB bench to be drilled and blasted separately.	Ore and OB bench to be drilled and blasted separately.	
7c	Different grade of mineral sorted out at mines.	Differnt grades of mineral stacked separately at PCH pad feed optimum grade to beneficiation plant.	Differnt grades of mineral stacked separately at PCH pad feed optimum grade to beneficiation plant.	
7d	Any beneficiation process at mines .	ROM mineral production is to be treated at existing beneficiation plant.	ROM mineral production has been treated at existing beneficiation plant.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	---	---	In respect of mineral conservation, the lessee has stacked diffrent grades of of mineral separately at PCH pad and blended it to feed optimum grade to beneficiation plant.

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Environment:

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Sl.No.	Item	Propasals	Actual work	Remarks
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- 8a Separate removal and utilization of topsoil (Rule 32) As per approved scheme of mining it is proposed that top soil available during regular mining activity will be stored seperately and will be utilized for stabilization of waste dump,slopes of tailing dam and to generate the green belt in surroundings of waste dump and mine area. Total 80480 cum soil generated. All the top generated has been utilized for revegetation purpose on the slope of crusher pad waste dump and lining of tailing dam.
- 8b Concurrent use or storage of topsoil As per approved scheme of mining it is proposed that top soil available during regular mining activity will be stored seperately and will be utilized for stabilization of waste dump,slopes of tailing dam and to generate the green belt in surroundings of waste dump and mine area. Total 80480 cum soil generated. All the top generated has been utilized for revegetation purpose on the slope of crusher pad waste dump and lining of tailing dam.
- 8c Separate dumps for overburden, waste rock, rejects and fines (Rule 33) Minearl and OB to be stacked separately at PCH pad and at proposed waste dump respectively. Minearl and OB been stacked separately at PCH pad and at proposed waste dump respectively.

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	NA	NA	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Nil	Part of the matured waste dump has been reclaimed by soil capping and plantaion. Total 7100 saplings has been planted during the year at matured dump ends.	No reclamation is possible till the mature area is available. However 26.1 ha area at waste dump on moving end has been covered with soil and plantaion.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	4700 saplings hve been propoed for the year 2015-16.	7100 saplings hve been plante during the year 2015-16.	
8g	Survival rate	--	90%	
8h	Water sprinkling on roads to control airborne dust	Effetive water sprinkling to be done to control airborne dust.	Effective water sprinling with four water sprinklers on haul roads to ensured control on airborne dust due to mining activity.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	---	---	The area around the mine is very well maintained. he safety and environment is well displayed by posters and visual boards.

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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly return submitted upto July 2016. Annual return submitted upto 2015-16	Monthly return submitted upto July 2016. Annual return for 2015-16 has not been submitted on line.	Violation of rule 45(5)(b) of MCDR,1988 has been issued on 07.10.2016

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer - Sh. Jaimurtti Sandip, Manager (Mine Planning) Mines Manager- Sh. Vinod Kumar (O/C), Sh. Kishore Kumar(U/G) Geologist- Dr. U.S. Parrek	Mining Engineer - Sh. Jaimurtti Sandip, Manager (Mine Planning) Mines Manager- Sh. Vinod Kumar (O/C), Sh. Kishore Kumar(U/G) Geologist- Dr. U.S. Parrek
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current O/C working 175.12 ha Waste disposal 307.76 Ha Tailing dam 181.19 ha Green Belt - 250.62 ha	Covered under current O/C working 175.12 ha Waste disposal 307.76 Ha Tailing dam 181.19 ha Green Belt -250.62 ha
9d	Scrutiny of Annual return on afforestation	No. of sapling planted 7100	Complied.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Mineral reject(tailing )generated - 4481203 MT 0.57% Pb, 1.42% Zn	Complied.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Production and R O M stock U/G - Opening : nil	Complied
		Closing : nil U/G - Opening : nil	
		Closing : nil U/G - Opening : nil	
		Closing : nil O/c - opening : 40794 MT	
		Closing : 4559 MT	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex Mine price 1939.88 PMT	Complied.

9h	Scrutiny of Annual return on fixed assets	---	---	complied
9k	Scrutiny of Annual return on mining machineries	---	---	Complied

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**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
Rule 13(1)	07-OCT-16		Rule 13(1)	07-OCT-16	
Rule 23E(2)	07-OCT-16	28-DEC-16	Rule 45(5)	07-OCT-16	
Rule 45(5)	07-OCT-16				

**Date :**

**(Kotriwal B.L.)**

Indian Bureau of Mines