#### INDIAN BUREAU OF MINES MINERALS DEVELOPMENT 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: KQ10 ) Kotriwal B.L.

Officer and ID No.

(ii) Designation : Regional Controller Mines

(iii) Accompaning mine : Sri Vinod Kumar, Agent, Shri Vinod Jangir, Mines Mana

Official with

Designation

(iv) Date of Inspection : 12-JUN-19 Prev.inspection date : 11-DEC-18 (v)

PART-I : GENERAL INFORMATION

(a) Mine Name : RAMPURA AGUCHA

(b) Registration NO. : IBM/421/2011

(C) Category : A Mechanised

(d) Type of Working Underground

(e) Postal address

> State : RAJASTHAN District BHILWARA Village **AGUCHA** Taluka HURDA Post office AGUCHA Pin Code : 311029

FAX No. : 01483-233073

E-mail : sanjay.sharma@vedanta.co.ii

01483-23331, 23332 Phone

(f) Police Station : Gulabpura First opening date : 05-FEB-81 (g)

Weekly day of rest (h) : MON

Address for : HINDUSTAN ZINC LTD.

correspondance RAMPURA AGUCHA MINE,

PO AGUCHA, BHILWARA

3. Lease Number : RAJ0652 (a)

> (b) Lease area : 1200 Period of lease : 50 (C)

(d) Date of Expiry : 12-MAR-30

Mineral worked 4. : 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 : Shri Vinod Kumar

Rampura-Agucha Lead-Zinc Mine Agucha, Bhilwara, Rajasthan BHILWARA

RAJASTHAN

Phone: 01483-229012 FAX: 01483-229011

Mining Engineer

Name : Shri Nirmalendu Kumar, Full Time

Qualification : B.E(Mining),1st class(UR)under MMR 1961

Appointment/ : 24-APR-19

Termination date

Geologist

Name : Ranjan Gupta, Full Time

Qualification : MSc (Tech) Geology

Appointment/ : 01-MAY-17

Termination date

Manager

Name : Sachin M Deshmukh

Qualification : B.E. Mining Appointment/ : 24-NOV-20

Termination date

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

MP review under 17(1) MCR 2016 22-FEB-17 MP modif under 17(3) MCR 2016 27-MAR-18

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	A total of 65 BH with 11000 meters of drilling has been proposed during the year 2018-19.	A total of 175 BH with 13616 meters of drilling has been carried out.	NIL.
1b	Exploration over lease area for geological axis 1 or 2	During the year 2018-19, a total of 65 BH have been proposed to upgrade the resource.	A total of 175 BH have been drilled during the year 2018-19.	Out of total lease area of 1200 Ha, an area of 227.39 has been explored under G1/G2 level of exploration. Remaining 972.61 Ha area is nonmineralised and occupied by infrastructure.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Mining Associate private Limited and Trans Directional Mining Associates. No proposal of expenditure.	Exploration has been carried out by Trans Directional Mining Associates. Expenditure around of Rs. 9.48Cr.(UG+Surface drilling).	NIL.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Proposals have been given to upgrade resource to reserve.	Accordingly exploration has been executed to upgrade resource to reserve as details given in para 1(a).	Out of total lease area of 1200 Ha, an area of 227.39 has been explored under G1/G2 level of exploration. Remaining 972.61 Ha area is nonmineralised and occupied by infrastructure.
1e	Balance reserve as on 01/04/20	No specific proposal of reserve and resource for year to year basis.	As on 01/04/2019, the Reserve and Resource was 36 million tons and 55 million tons respectively.	As per AR 2018-19.

1f General remarks of inspecting officers on geology, exploration etc

A total of 65 BH with 11000 meters of drilling has been proposed during the year 2018-19.

A total of 65 A total of 175 BH with Exploration work BH with 11000 13616 meters of drilling is being carried meters of has been carried out. out using

Exploration work is being carried out using directional drilling and it reduces the cost and length of drilling.

## Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	(1) Opencast (OC): S500- N850/E150- E700. (2) Underground( UG) development: Total horizontal development proposed-42376 mts, Total vertical development proposed- 3720 mts.	(1) Opencast: No mining operation for opencast. (2) UG development: Total horizontal development completed- 27689 mts, Total vertical development completed completed- 1891 mts.	Development has not been carried out as per approved proposal.  Therefore, violation of Rule 11(1) of MCDR,2017 has been pointed out vide letter dated 19/12/2018 and which is being followed up.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	top soil generation as no fresh area has been	Open pit mine has been closed since March 2018. Hence, no fresh generation of top soil and no fresh area have been developed for benches.	NIL.
2c	Stripping ratio or ore to OB ratio	Proposed striping ratio was 1:8.0 (t/t)	NIL as open pit reaches its ultimate pit limit in March 2018.	NIL.
2d	Quantity of topsoil generation in m3	top soil	No top soil has been generated during 2018-19.	NIL.

2e	Quantity of overburden generation in m3	A total of 888499 tonne from opencat. Waste generation of 3.27 million tonnes from UG.	OB has not been generated from opencast as no excavation during the year 2018-19 from opencast for the reason that pit reaches upto the ultimate pit limit in march 2018. Waste generation form UG was 1785208 tonnes.	Generation of waste from UG was less due to less development.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Mining operation has been proposed from opencast pit along with underground.	further openpit mine was	There is short fall in UG development for which violation of Rule 11(1) of MCDR,2017 has been pointed out vide this office letter dated 19/12/2018 and is being followed up.

## Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One Open Pit and UG mining.	One Open Pit and UG mining.	No working in openpit during the year 2018-19.
3b	Quantity of ROM mineral production proposed	301376 MT (OC), 4500000 MT (UG), Total 4801376 MT	Nil (OC), 1,709,767 MT (UG), Total 1,709,767 MT	Mineral production was less due to less development and no working in open pit.
3с	Recovery of sailable/usable mineral from ROM production	100%	100%	NIL.
3d	Quantity of mineral reject generation		No Mineral reject generation. The entire ROM is subject to beneficiation.	NIL.
3e	Grade of mineral rejects generation and threshold value declared.		Not applicable. Entire ROM is being feed to the beneficiation plant irrespective of the grade.	NIL.
3f	Quantity of sub grade mineral generation.	No proposal of Sub-grade Generation.	No Sub-grade generation. The entire ROM is subject to beneficiation.	NIL.
3g	Grade of sub grade mineral generation	No proposal.	Not applicable.	NIL.

3h Manual / No proposal of Entire ROM is feed to NIL. the beneficiation plant. Mechanised method adopted segregation as for segregating entire ROM is from ROM subject to the beneficiation. 3i Any analysis or Not applicable as no No proposal. NIL. beneficiation As no proposal proposal. study proposed of Sub-grade and carried out or Mineral for sub grade reject mineral and generation. rejects. Зj Provision of Open pit: Drilling and blasting No drilling and drilling and has not been carried out blasting in Staggered blasting in in open pit as open pit opencast during pattern of mineral benches drilling has reaches its ultimate pit 2018-19 as open been proposed limit in March 2018. pit reaches its ultimate pit limit with hole Drilling and blasting has been carried out as depth from 11 in March 2019. to 12mts, Sub per proposal in UG grade development and stopes. drilling- 1 to 1.25 mts, variable spacing from 3 to 6 mts etc. Under Ground: Drilling pattern in ore- Burn Cut method of development, Drilling pattern in Stopes- Ring drilling with fan cut pattern. 3k Provision of Openpit No open pit development NIL. mining development: as as open pit reaches Ore and waste its ultimate pit limit machineries in mineral benches is proposed to in March 2018. Deployment of Mining be excavated by combination machinery has been found to be as per proposal in of hydraulic excavators and UG operations. dumpers. UG development: Twin Boom

> Jumbo, Loaders,

Trucks (30 and 60 T)etc.

31	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of the benches have been proposed 10 to 12 mts. for open pit development.	No open pit development as as open pit reaches its ultimate pit limit in March 2018.	NIL.
3m	Total area covered under excavation/pits	175.12 На	175.12 Ha (No fresh area was proposed for development)	NIL.
3n	Ore to OB ratio for the pit/mine during the year.	Proposed striping ratio was 1:8.0 (t/t)	NIL as open pit reaches its ultimate pit limit in March 2018.	NIL.
30	Total area put in use under different heads at the end of year	Ha, Waste Dump: 252 Ha,	Area under Mining: 175.12 Ha, Waste Dump: 252 Ha, Infrastructure, road etc: 86.14 Ha, Tailing Pond: 181.19 ha. etc.	NIL.
3p	Production of ROM mineral during the last five year period as applicable	2013-14: 6.00 2014-15: 6.00 2015-16: 5.20 2016-17: 6.04 2017-18: 4.74 2018-19: 4.80	2013-14: 5.80 2014-15: 5.45 2015-16: 4.70 2016-17: 4.70 2017-18: 3.84 2018-19: 3.33	Figures in million tonnes. Less production is in account of less development.
3q	General remarks of inspecting officers on method of mining etc.	For reporting year mining operations have been proposed from both opencast and underground mining method.	No opencast working during the year 2018-19 due as open pit reaches its ultimate pit limit in March 2019. Production has been carried out only from UG mining operations.	Modern and scientific mining method by paste filling are in practice for optimal exploitation of mineral wealth. Latest technologies and machineries are being deployed.

### Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a		top soil and	Top soil and Mineral Reject has not been generated during the reporting year. Waste generated during the year has been dumped at designated place.	NIL.

4b	Location of topsoil, OB and mineral reject dumps	top soil and		NIL.
4c	Number of dumps within lease area and outside of lease area	Inside Lease area- One Outside Lease area: NIL	Inside Lease area- One Outside Lease area: NIL	NIL.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL.	Outside UPL.	NIL.
4e	Number of active and alive dumps.	One.	One.	NIL.
4f	Number of dead dumps.	None.	None.	NIL.
4g	Number of dumps established.	Dump terrace and slopes are to be stabilized with plantation.	Plantation has been observed over dump terrace and slope.	There is single active dump and the non-moving ends of dump are being stabilised by the way of plantation.
4h	Whether Retaining wall or garland drain all along dumps are there.	No specific proposal of garland drain all along the waste dump during reporting year.	Garland drain has been observed along waste dump.	NIL.
4i	Length of Retaining wall or garland drain all along dumps	No specific proposal of retaining wall and garland drain during reporting year.	Garland drain and retaining wall has been observed all along the waste dump.	NIL.
<b>4</b> j	Number of settling ponds	No proposal of settling pond during reporting year.	NIL.	NIL.

4k	inspecting officer on waste	one existing waste dump in leas area. Dumping of the waste has been proposed over	being carried out over existing dump as per proposal. Retaining wall and garland drain has been observed along the dump. Part of the waste	NIL.
		existing dump	dump has been stabilized and rehabilitated with	

# 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.	No proposal for back filling of open pit. Backfilling of U/G stoped out area has been proposed.	Underground stopes back filled after extraction of minerals.	NIL.
5b	Area under backfilling of mined out area	backfilling of	No backfilling in mine pit. Back filling of U/G stopes have been carried out.	NIL.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	top soil generation as no fresh area has been	Open pit mine has been closed since March 2018. Hence, no fresh generation of top soil and no fresh area have been developed for benches.	NIL.
5d	Total area fully reclaimed and rehabilitated	No proposal of full reclamation and rehabilitation of any area. Part of the waste dump area has been proposed for rehabilitation .	Part of the matured waste dump has been rehabilitated by soil capping and plantation.	NIL.

5e	General remarks of inspecting officers on backfilling and reclamation etc.		No backfilling in mine pit. Back filling of U/G stopes have carried out. Part of the matured waste dump has been rehabilitated by soil capping and plantation.	NIL.
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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).	As per rule 26 of MCDR, 2017 holder of mining lease shall submit PMCP before 1st day of July every year.	PMCP report for the year 2018-19 has been submitted.	NIL.
6b	Area available for rehabilitation (ha) .	20.0 Ha area has been proposed to rehabilitate.	Around 20.0 Ha area has been rehabilitated.	NIL.
6c	afforestation done (ha).	20.0 Ha area has been proposed for afforestation.	Afforestation has been carried out over an area of around 20.0 Ha.	NIL.
6d	No. of saplings planted during the year	20000 number of saplings have been plan to planted.	20000 number of saplings have been planted.	NIL.
6е	Cumulative no .of plants	327464 numbers.	329464 numbers.	Survival rate is around 90%.
6f	Any other method of rehabilitation	No proposal of any other method of rehabilitation other than plantation.	Not applicable as no proposal.	NIL.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	1470588 m3 (backfilling of UG stopes).	943487 m3 (As repoerted).	Less backfilling of the stopes is due to less production and less development.

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	1470588 m3 (backfilling of UG stopes).	943487 m3 (As repoerted).	Less backfilling of the stopes is due to less production and less development.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati 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.
61	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	No proposal.	Not applicable.	NIL.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal.	Not applicable.	NIL.
60	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal.	Not applicable.	NIL.
6p	Compliance of environmental monitoring (core zone and buffer zone)	3 stations in core zone & 3 stations in buffer zone.	3 stations in core zone & 3 stations in buffer zone. Monitoring parameters are found within permissible limits.	NIL.

ба General remarks Plantation by Plantation work has been NIL. of inspecting 20000 saplings carried out as per officers on PMCP has been proposal. Also coir compliance and proposed over matting has been carried the 20.0 ha progressive out at places. closure area of waste operations etc. dump.

#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM having grade variability is proposed to stacked separately.	ROM having grade variability has been stacked separately and blended to maximize metal recovery.	NIL.
7b	Method of grade- wise mineral sorting i.e. manual or mechanical.	Mechanical.	Mechanical.	NIL.
7c	Different grade of mineral sorted out at mines.	Different grades of mineral stacked separately at PCH pad and feed optimum grade to beneficiation plant.	Different grades of mineral stacked separately at PCH pad, and blended it to feed optimum grade to beneficiation plant.	NIL.
7d	Any beneficiation process at mines .	6.5MTPA beneficiation plant has been installed within the lease area. The process includes mainly crushing of ROM, grinding of ROM, Classification , differential flotation cell etc.	_	NIL.

7e General remarks Beneficiation Beneficiation has been NIL. of inspecting of ROM has observed as per officer on been proposed proposal. Mineral and process conservation and includes beneficiation grinding of issues ROM, Classification , differential flotation cell

#### Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	top soil generation during 2018- 19. However,	Open pit mine has been closed since March 2018. Hence, no fresh generation of top soil and no fresh area have been developed.	NIL.
8b	Concurrent use or storage of topsoil	top soil generation during 2018- 19. However,	Open pit mine has been closed since March 2018. Hence, no fresh generation of top soil and no fresh area have been developed.	NIL.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Mineral and Overburden is proposed stacked separately at PCH pad and at proposed waste dump respectively.	Mineral stacked at PCH pad and Overburden has been stacked at waste dumps distance away from each other.	NIL.

Remarks

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal of use of waste rock for restoring the land to its original use. However, waste rock is proposed to backfilled in stopped out area.	U/G stopes back filled after extraction of minerals.	NIL.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)		Plantation has been obsrevd over the waste dump area.	NIL.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	20000 number of saplings have been proposed to plant.	20000 saplings have been planted during the reporting year.	NIL.	
8g	Survival rate	No specific proposal.	90%	NIL.	
8h	Water sprinkling on roads to control airborne dust	air born dust particle, water sprinkling has	Water sprinkling has been observed with water sprinklers (capacity 40KL) on haul roads to control airborne dust due to mining activity.	NIL.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	plantation of 20000 sapling	The area around the mine is very well maintained. The propaganda for safety and environment is well displayed by posters and visual boards. Planation has been carried out as per proposal.	NIL.	
Comp	Compliance of Rule 45:				

Sl.No. Item Propasals Actual work

9a	Status of submission of Monthly and Annual returns	As per rule 45 monthly and annual return to be submitted by the lessee.	Monthly and annual return has been filed by the lessee.	NIL.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information of Mining Engineer, Geologist and Manager has been furnished.	Mining Engineer, Geologist and Manager has been appointed in the mine.	NIL.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	175.12 Ha., waste disposal:	The area mentioned under different heads found to be in order.	NIL.
9d	Scrutiny of Annual return on afforestation	20000 number od saplings have been planted.	Found to be in order.	NIL.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No mineral reject generation.	Mineral reject has not been generated.	NIL.
9f			ROM stock: 6131 tonnes, Closing stocks of concentrates: Pb-424 tonnes, Zn-9794 tonnes.	NIL.

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	2276.00 per tonne, no sale value as the mine is for captive purpose, Cost	As a captive mine, the cost of production and Ex-mine price should be same. Violation in difference in figure of ex-mine price and Cost of production has been issued vide letter dated 04/07/2019.	NIL.
9h	Scrutiny of Annual return on fixed assets	The value of fixed assets furnished is Rs. 40757258107.00	The information furnished appears to be correct.	NIL.
9k	Scrutiny of Annual return on mining machineries		The information furnished appears to correct.	NIL.

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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)	02-JUL-19		
MCDR17 Rule 45(7)(a)	02-JUL-19		

Date: (Kotriwal B.L.)

Indian Bureau of Mines