

**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 : **G021**) **D R GURJAR**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Vinod Kumar, Agent & Sh. Ranjan Gupta, Geologis
Official with
Designation
- (iv) Date of Inspection : 11-SEP-19
- (v) Prev.inspection date : 12-JUN-19

PART-I : GENERAL INFORMATION

1. (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 : hzl.ram@vedanta.co.in
Phone : 01483-23331, 23332
- (f) Police Station : Gulabpura
- (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 : Sunil Duggal
Hindustan Zinc Limited
Yashad Bhawan, Swaroop
Sagar Udaipur BHILWARA
RAJASTHAN
Phone: 0294-2529182
FAX : 0294-2525765

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 : Shri Vinod Jangir
Qualification : BE Mining
Appointment/ : 11-APR-18
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

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.	
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 1200 Ha., an area of 227.39 has been explored under G1/G2 level of exploration. Remaining 972.61 hect. area is non mineralised and occupied by infrastructures & dumps etc.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Mining Associate private Limited, Asansol, WB and Trans Directional Mining Associates, Gurgaon, Haryana. 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 1200 Ha., an area of 227.39 has been explored under G1/G2 level of exploration. Remaining 972.61 hect. area is non mineralised and occupied by infrastructures & dumps etc.
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.	

1f	General remarks of inspecting officers on geology, exploration etc	Exploration work is being carried out as per proposals.
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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 during the year 2018-19. (2) UG development: Total horizontal development completed- 27689 mts, Total vertical development completed- 1891 mts.	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 by the previous inspecting officer.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No proposal of top soil generation as no fresh area has been proposed under excavation. Proposal of separate benching has been given in Ore and OB.	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.	
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 and no working has been carried out in Open pit during the year 2018-19.	Nil
2d	Quantity of topsoil generation in m3	During the year 2018-19 No top soil generation proposal given.	No top soil has been generated during 2018-19.	Nil

2e	Quantity of overburden generation in m3	A total of 888499 tonne from opencast. 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.	
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.	The openpit reaches upto the ultimate pit limit in march 2018. Hence, further openpit mine was closed and mining was only going through U/G mining method.	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 by the previous inspecting officer.

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	2018-19: 301376 MT (OC), 4500000 T (UG), Total 4801376 T	2018-19: Nil (OC), 3329951 T (UG), Total 3329951 T	
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	Nil
3d	Quantity of mineral reject generation	No proposal 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.	No rejects has been proposed.	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 / Mechanised method adopted for segregating from ROM	No proposal of ROM segregation as entire ROM is subject to the beneficiation.	Entire ROM is feed to the beneficiation plant.	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal. As no proposal of Sub-grade or Mineral reject generation.	Not applicable as no proposal.	Nil
3j	Provision of drilling and blasting in mineral benches	Open pit: Staggered pattern of drilling has been proposed with hole depth from 11 to 12mts, Sub grade 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.	Drilling and blasting has not been carried out in open pit as open pit reaches its ultimate pit limit in March 2018. Drilling and blasting has been carried out as per proposal in UG development and stopes.	No drilling and blasting in opencast during 2018-19 as open pit reaches its ultimate pit limit in March 2019.
3k	Provision of mining machineries in mineral benches	Openpit development: Ore and waste is proposed to be excavated by combination of hydraulic excavators and dumpers. UG development: Twin Boom Drill Jumbo,LPDT's, Loaders, Trucks (30 and 60 T)etc.	No open pit development as as open pit reaches its ultimate pit limit in March 2018. Deployment of Mining machineries have been found to be as per proposal in UG operations.	Nil

3l	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 Ha	175.12 Ha (No fresh area was proposed for development during the year 2018-19)	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
3o	Total area put in use under different heads at the end of year	Proposal up to year 2020-21 Area under Mining: 175.12 Ha, Waste Dump: 316 Ha, Tailing Pond: 203.20 ha., others(Mineral storage, infrastructure s,Roads, Mill,township area etc.) - 92.64 ha.	At the end of year 2018-19: Area under Mining: 175.12 Ha, Waste Dump: 307.76 Ha,Tailing Pond: 181.19 ha. , others(Mineral storage, infrastructures,Roads, Mill,township area etc.) -92.64 ha.	
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.			Modern and scientific mining methods are in practice for optimal exploitation of mineral wealth. Latest technologies and machineries are being deployed in U/G mining. Method of mining is suitable to the type of deposit.

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 top soil and Mineral Reject generation. OB/waste is proposed to dump Separately.	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	No proposal of top soil and Mineral Reject generation. OB/waste is proposed to dump at existing waste dump between grid N1260 to N2590/ W600 to E600 in 20m of lifts.	Top soil and Mineral Reject has not been generated during the reporting year 2018-19. Waste generated during the year has been dumped at designated place.	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.	During the year 2018-19 it was proposed that total 15000 sqm. waste dump slope area will be covered with Geotextile but actual 8000 sqm. area was only covered with Geotextile during the year, hence violation of Rule 11(1) of MCDR 2017 issued to the lessee.

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
4j	Number of settling ponds	No proposal of settling pond during reporting year.	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management			(1) Dumping of the waste is being carried out over existing dump as per proposal. Retaining wall and garland drain has been observed along the dump. Part of the waste dump has been stabilized and rehabilitated with plantation. (2) During the year 2018-19 it was proposed that total 15000 sqm. waste dump slope area will be covered with Geotextile but actual 8000 sqm. area was only covered with Geotextile during the year, hence violation of Rule 11(1) of MCDR 2017 issued to the lessee.

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
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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	No proposal of backfilling of mined out area or mine pit. Backfilling of U/G stopes proposed.	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)	No proposal of top soil generation as no fresh area has been proposed under excavation.	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.

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 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
6e	Cumulative no .of plants	327464 numbers.	329464 numbers.	Nil
6f	Any other method of rehabilitation	No proposal of any other method of rehabilitation other than plantation.	Not applicable as no proposal.	Geotextile covering of waste dump is being carried out however during the year 2018-19 it was proposed that total 15000 sq.m waste dump slope area will be covered with Geotextile but actual 8000 sq. m area was only covered with Geotextile during that year hence violation of Rule 11(1) of MCDR 2017 issued to the lessee.
6g	Cost incurred on watch and care during the year	Rs. 4300000	Rs. 2880000	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	943487 m3	Less backfilling of the stopes is due to less production and less development.
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	No proposal.	Not applicable.	
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	No proposal.	Not applicable.	Nil
6o	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

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	(1)During the year 2018-19 total 2.6km masonry boundary wall construction was proposed around the perimeter of ultimate pit limit but till inspection no such construction has been carried out, (2)During the year 2018-19 it was proposed that total 15000 sq.m waste dump slope area will be covered with Geotextile but actual 8000 sq. m area was only covered with Geotextile during that year, hence violation of rule 11(1) of MCDR 2017 issued to the lessee.
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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	All ROM mineral dispatched to captive beneficiation plant and no garde wise sorting.	All ROM mineral dispatched to captive beneficiation plant and no garde wise sorting.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No proposal of 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 .	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.	Beneficiation has been observed as per proposal.	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			No issue was observed related to mineral conservation.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal of top soil generation during 2018-19. However, it is proposed that the top soil will be preserved whenever encountered and will be utilized for rehabilitation purpose.	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	No proposal of top soil generation during 2018-19. However, it is proposed that the top soil will be preserved whenever encountered and will be utilized for rehabilitation purpose.	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)	Yes waste dump and tailing dam proposal given.	As per proposals.	Nil
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 in 20 Ha area at waste dump to rehabilitate.	Plantation has been observed 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 during the year 2018-19.	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	To control the air born dust particle, water sprinkling has been proposed over the roads.	Water sprinkling has been observed with water sprinklers 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			The general aesthctic beauty in and around mines area 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 monthly and annual return to be submitted by the lessee.	Monthly and annual return has been filed by the lessee on time.	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.	Opencast working: 175.12 Ha., waste disposal: 307.76 Ha., Occupied by plant, buildings, residential, welfare buildings & roads: 92.64 Ha., Tailing disposal: 181.19 Ha.	The area mentioned under different heads found 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	Scrutiny of Annual return on ROM stock and/or graded ore	ROM stock: 6131 tonnes, Closing stocks of concentrates: Pb-424 tonnes, Zn-9794 tonnes.	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	Ex-mine price: 2276.00 per tonne, no sale value as the mine is for captive purpose, Cost of production furnished is: 9529.93 per tonne.	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 by the previous inspecting officer.	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	BACK HOE, DUMPERS, LHD's, LPDT's, DOZER, ROCK DRILL, AIR COMPRESSOR, WINDING ENGINE etc.	The information furnished appears to be correct.	Nil

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)	19-SEP-19			
MCDR17	Rule 31(4)	19-SEP-19			

Date :

(D R GURJAR)

Indian Bureau of Mines