

I/12220/2023

MCDR inspection REPORT

Jabalpur regional office

Mine file No : MP/DAMOH/LST-6

Mine code : 38MPR09003

- (i) Name of the Inspecting : **S025**) **IBRAHIM SHARIEF**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine :
Official with
Designation
- (iv) Date of Inspection : 19-NOV-22
- (v) Prev.inspection date : 18-FEB-19

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **DIAMOND PATHARIA1247.267H**
- (b) **Registration NO.** : **IBM/398/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **MADHYA PRADESH**
- District : **DAMOH**
- Village : **SATPARA,JAGTHAR**
- Taluka : **PATHARIA**
- Post office : **PATHARIA**
- Pin Code : **470666**
- FAX No. : **07601-241235**
- E-mail : **diam@sancharnet.in**
- Phone : **07601-241301 TO 304**
- (f) **Police Station** : **NARSINGHPUR**
- (g) **First opening date** : **30-APR-04**
- (h) **Weekly day of rest** : **SUN**
2. **Address for correspondance** : **M/S HEIDELBERGCEMENT INDIAN LIMITED**
BIRLAPUR, P.O. NARSINGHGARH
DISTT. DAMOH (M.P.) 470675
3. (a) **Lease Number** : **MPR0103**
- (b) **Lease area** : **1689.4**
- (c) **Period of lease** : **20**
- (d) **Date of Expiry** : **30-JUL-95**
4. **Mineral worked** : **LIMESTONE** **Main**

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5. Name and Address of the

Lessee : HEIDELBERGCEMENT INDIAN LIMITED
 BIRLAPUR, P.O. NARSINGHGARH
 DAMOH MADHYA PRADESH
 Phone:07601-241301 TO 304
 FAX :07601-241235

Owner : MR S K TIWARI.
 HeidelbergCement India
 Limited, 2nd Floor, Plot No
 68, Sector-44, Gurugram
 (Haryana) - 122002 DAMOH
 MADHYA PRADESH
 Phone: 0124-4503733
 FAX : 0124-4147698

Agent : Mr. Sanjeev Kumar Gupta
 HeidelbergCement India
 Limited P.O. & Village-
 Narsingarh Distt. Damoh (
 M.P.) 470675 DAMOH MADHYA
 PRADESH
 Phone: 07601-241301
 FAX : 07601-241301

Mining Engineer

Name : C.P.DADHICH,Full Time
 Qualification : BE MINING
 Appointment/ :
 Termination date

Geologist

Name : RAVI SHANKER SHUKLA,Full Time
 Qualification : MSC GEOLOGY
 Appointment/ :
 Termination date

6. Date of approval of Mining : MP review under 17(1) MCR 2016 01-FEB-17
 Plan/Scheme of Mining : MP review under 17(1) MCR 2016 15-NOV-21

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Nil	Entire lease area has been explored in G1 scale
1b	Exploration over lease area for geological axis 1 or 2	No proposal during the year	Entire lease area has been explored in G1 scale	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal	Nil	Exploration was carried out by GSI and M/s Holtec Consulting Private Limited (HOLTEC) under supervision of lessee.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Entire lease area has been explored in G1 scale
1e	Balance reserve as on 01/04/20		Balance Reserves 168.73 Million tonne Balance Resources - 35.86 Million tonne	
1f	General remarks of inspecting officers on geology, exploration etc			The rocks in the area are tectonically or structurally undisturbed. Although shale and limestone bands are covered under the soil, its continuity has been established by drilling in the entire extent of the mining lease. The avg. strike length of Patharia Mines is approx. 7.0 km, avg. width 1.5 km and avg. depth 8-10m.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	Pit No- 7(N) 312384E to 312685E & 2651125N to 2651780N Pit No.- 7 (S) 312116E to 313000E & 2650810N to 2651360N	Pit No- 7(N) 312627E to 312852E & 2651470N to 2651800N Pit No.- 7 (S) 312730E to 312903E & 2650968N to 2651470N	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Top Soil-1 bench (0.5-0.75 m) Sub Soil -1 bench (2-3 m) Hard OB -2 bench (4-6 m) Limestone 2 bench (6-8 m)	Top Soil-1 bench (0.5-0.75 m) Sub Soil -1 bench (2-3 m) Hard OB -2 bench (4-6 m) Limestone 2 bench (6-8 m)	
2c	Stripping ratio or ore to OB ratio	0.48	0.22	
2d	Quantity of topsoil generation in m3	261896	87861	
2e	Quantity of overburden generation in m3	2441304	1114530	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			During the year one bench in overburden soil, one bench in overburden Shale (waste rock) and two benches in Limestone The top soil removed separately from subsoil / clay (weathered shale). The total OB (SOB & HOB) was simultaneously back filled in the exhausted Pit.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2 No. of pits proposed	2 no. of pits operated for production	

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3b	Quantity of ROM mineral production proposed	5625000	5429162	
3c	Recovery of sailable/usable mineral from ROM production	4500000	3882769	
3d	Quantity of mineral reject generation	1125000	926044	Screen rejects below 34% CaO
3e	Grade of mineral rejects generation and threshold value declared.	Below 34 % CaO	Below 34 % CaO	
3g	Grade of sub grade mineral generation	1490183 CaO% 34-38%	1430485, CaO% 34-38%	Sub-grade mineral is blend with high grade mineral and utilized 100 percent.
3h	Manual / Mechanised method adopted for segregating from ROM	The crushing plant & ancillary facilities mainly consist of 1200TPH, impact crusher with screening system which can crush the limestone to (-75 mm) size. The crusher is preceded by a screening system (Wobbler feeder+vibrating screen combination) that will generate a screen rejects which shall be less than 20mm.	The crushing plant & ancillary facilities mainly consist of 1200TPH, impact crusher with screening system which can crush the limestone to (-75 mm) size. The crusher is preceded by a screening system (Wobbler feeder+vibrating screen combination) that will generate a screen rejects which shall be less than 20mm.	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal during the year	NIL	

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3j	Provision of drilling and blasting in mineral benches	Yes proposed	Drilling and Blasting is being carried out in mineral benches	
3k	Provision of mining machineries in mineral benches			
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes suitable	Yes suitable	
3m	Total area covered under excavation/pits	326.06	301.65	
3n	Ore to OB ratio for the pit/mine during the year.	0.48	0.22	
3o	Total area put in use under different heads at the end of year	351.56	325.57	
3p	Production of ROM mineral during the last five year period as applicable	2017-18 - 5625000 2018-19 - 5625000 2019-20 - 5625000 2020-21 - 5625000 2021-22 - 5625000	017-18 - 4524086 2018-19 - 4636100 2019-20 - 4623314 2020-21 - 4401599 2021-22 -5429162	Figures in Tonnes

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3q General remarks of inspecting officers on method of mining etc.

The conventional opencast fully mechanized mining with Hydraulic Excavator in conjunction with dumpers is being followed at the mine. After removing topsoil, (0.5 to 0.75m thickness), the overburden / reject bench is removed by drilling and blasting. The sequence of operation involves dozing, drilling, blasting, loading, crushing/screening and transportation. Drilling and blasting is carried out for hard overburden and underlying limestone.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No proposal as simultaneous backfilling of OB is bieng done and spreading of top soil over the backfilled area.	As proposed.	
4b	Location of topsoil, OB and mineral reject dumps	No proposal	Nil	
4c	Number of dumps within lease area and outside of lease area	No proposal	Nil	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No proposal	Nil	

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4e	Number of active and alive dumps.	Nil	Nil	
4f	Number of dead dumps.	No dead dumps	Nil	
4g	Number of dumps established.	No proposal	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal	Nil	
4i	Length of Retaining wall or garland drain all along dumps	No proposal	Nil	
4j	Number of settling ponds	No proposal	Nil	
4k	Specific comments of inspecting officer on waste dump management			No waste is being dumped out side, entire waste generated is being backfilled.

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.	Full extraction of ore before backfilling is proposed	Full extraction of ore is reported before backfilling	
5b	Area under backfilling of mined out area	19.10 Ha	21.38 Ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	261896	87861	
5d	Total area fully reclaimed and rehabilitated	13.50	7.10	

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5e	General remarks of inspecting officers on backfilling and reclamation etc.	The mined out area will be back filled concurrently with the hard overburden/ waste at the bottom and covered with topsoil in order to bring back the mined out area to its natural topography. These areas used for afforestation, agricultural purpose etc.
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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).	To be submitted on time	Yes Submitted	
6b	Area available for rehabilitation (ha) .	No proposal	NA	
6c	afforestation done (ha).	No proposal	NA	
6d	No. of saplings planted during the year	No proposal	NA	
6g	Cost incurred on watch and care during the year	No proposal	NA	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	2570*410*17	2975*430*15	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	19.10 Ha	21.38 Ha	

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6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	13.50	7.10
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal during the year	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring of Air, Water and Noise to be carried out in and around lease area	Quarterly monitoring of Air, Water and Noise is being carried out regularly in and around lease area
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		Concurrent backfilling of mined out area is being carried out by OB/ waste generated followed by spreading of top soil to restore the mined out land to nearly pre mining condition to use for arorestation/ Agricultural purpose.

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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Rom produced is proposed to dispatch after screening to seperate intercalated waste	Rom is being dispatched after screening for seperation of intercalated waste.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanised method is praticed	Mechanised method is adopted	
7c	Different grade of mineral sorted out at mines.	Cement grade only	Cement grade only	
7d	Any beneficiation process at mines	Dry Crushing & screening is being proposed	Dry Crushing & screening is being done	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Low grade limestone comprising CaO content 34-38% encountered during mechanized mining in small patches and thin bands cannot be segregated during mining. This material is suitably blended with high grade limestone available in our mines and sweetener limestone procured from outside parties.	The crusher is preceeded by a screening system (wobbler feeder + vibrating screen combination). Limestone of +75 mm feeds to crusher and -75 mm material has sent to vibrating screen plant to recover limestone, screened limestone sent to factory and clay is rejected. For practical reasons the actual secondary screen has been fixed at a screen cut of 16- 20mm.The limestone recovery approximate 80% after screening and approximate 20% rejects will be generated during crushing of ROM.	It results in reduction in contamination of limestone and enhancement of approx. 1% Cao. Use of rubber decks, change of season for reducing contamination carried out.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	It is proposed to remove Top Soil and utilised it to spread over backfilled area	Top soil generated is being removed separately and utilised for spreading over backfilled area.
8b	Concurrent use or storage of topsoil	Top Soil is proposed to be utilised over backfilled area	Top Soil is being used over backfilled area
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No proposal of Waste dump as the OB is being used concurrently for backfilling. intercalated waste generated is being dumped seperately and utilised for backfilling.	As proposed
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	OB / intercalated waste generated is proposed to be utilised for backfilling of mined out area to restore the land to pre mining condition to utilise for Afforestation/ Agricultural purpose.	OB / intercalated waste generated is being utilised for backfilling of mined out area to restore the land to pre mining condition to utilise for Afforestation/ Agricultural purpose.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Mined out area is being restored by backfilling regukarky as the deposit is of shallow depth	Phased restoration is being carried out as proposed

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8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	4000 no. f sapplings to be planted	8100 no. of sapplings planted during the year
8g	Survival rate	No proposal	94%
8h	Water sprinkling on roads to control airborne dust	Water sprinkling arrangements shall be made in working area and haul roads to suppress the dust generated	Water sprinkling arrangements are made to suppress the dust.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Proper housekeeping and general cleanliness are the basic features of our working culture. Emphasis is given towards maintaining Aesthetic Beauty in mines and surroundings by maintaining cleanliness in general, good & healthy working environment, block-wise plantation, developing decorative lawns, etc. The efforts are not limited to the mines working area alone but outside of mines also like residential colony, temple, school ground, hospital, etc.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly returns and Annual returns shall be submitted on time in accordance with Statute.	Monthly returns and Annual returns are submitted regularly. Penlaty was imposed earlier for late submission of monthly return.	

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9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer : Mr. C.P. Dadhich and Geologist : Mr. R. S. Shukla were employed	Above persons are employed in the mine.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	1. Already exploited & abandoned by opencast (O/C) mining : 301.65 ha 2. Covered under current (O/C) Workings : 125.93 Ha 3. Reclaimeed and Rehabilitated : 169.38 Ha 4. Occupied by plant, buildings, residential, welfare buildings & roads : 16.92 Ha 5. Green belt : 9.84 Ha 6. Work under PMCP : 7.10 Ha	As submitted by lessee
9d	Scrutiny of Annual return on afforestation	8100 no. of sapplings planted	Plantation observed in the lease area.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	926044 Tonnes	As submitted by lessee.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM ore: - 826907 Tonnes Graded ore :- 212735 Tonnes	As submitted by lessee
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex mine price = Sale price = Cost of production = Rs.261.58	As submitted by lessee
9h	Scrutiny of Annual return on fixed assets	Rs. 200455506	As submtted by lessee

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9k	Scrutiny of Annual return on mining machineries	Shovel- 4.0 cum- 2 No., BACK Hoe- 3.8 cum-3 No., Dumper- 40 T- 9 No. & 35 T- 8 No. Dozer- 2 No.	Shovel- 4.0 cum- 2 No., BACK Hoe- 3.8 cum-3 No., Dumper- 40 T- 9 No. & 35 T- 8 No. Dozer- 2 No.	As submitted by lessee
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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

Date :

(IBRAHIM SHARIEF)

Indian Bureau of Mines