

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

**MCDR INSPECTION REPORT**

**Gandhinagar regional office**

**Mine file No :** RAJ/CHT/LST-8

**Mine code :** 38RAJ09006

- (i) Name of the Inspecting : **K018** ) **DR A Z KHAN**  
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Sh. Rajesh V Sambhrey, Agent  
Official with  
Designation
- (iv) Date of Inspection : 05-JAN-19
- (v) Prev.inspection date : 23-NOV-17

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **ADITYA**
- (b) **Registration NO.** : **IBM/441/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : RAJASTHAN
- District : CHITTORGARH
- Village : NEAR MEDIKA AMARANA
- Taluka : CHITTORGARH
- Post office : ADITYAPURAM SHAMBHUPURA
- Pin Code : 312612
- FAX No. : 01477-220289
- E-mail : adityacement@adityabirla.co
- Phone : 01472-220192-97
- (f) Police Station : Shambhupura
- (g) First opening date : 24-AUG-95
- (h) Weekly day of rest : SUN
2. Address for : ADITYA CEMENT WORKS  
correspondance : POST-ADITYAPURAM, Sawa, Amarpura, sindaudi  
DISTT-CHITTORGARH (Raj.)
3. (a) Lease Number : RAJ0394
- (b) Lease area : 760.69
- (c) Period of lease : 50
- (d) Date of Expiry : 28-APR-44
4. Mineral worked : LIMESTONE Main

## 5. Name and Address of the

Lessee : Aditya Cement  
 (Grasim Ind. Limited)  
 Adityapuram, Sawa  
 Shambhupura, Chittorgarh  
 CHITTORGARH RAJASTHAN  
 Phone:  
 FAX :

Owner : O.P. Puranmalka  
 Aditya Birla Centre, S. K.  
 Ahire Marg, Worli Mumbai  
 MUMBAI (SUBURBAN)  
 MAHARASHTRA  
 Phone: 022 - 66917800/  
 FAX : 022 - 66928109

Agent : RAJESH SAMBREY  
 ADITYAPURAM ADITYA CEMENT  
 CHITTORGARH RAJASTHAN  
 Phone: 01472-220289  
 FAX : 01472-22019

## Mining Engineer

Name : Shri Kamal Paliwal, Full Time  
 Qualification : B E Mining FCC  
 Appointment/ : 29-JUN-10  
 Termination date

## Geologist

Name : P.S.MISHRA, Full Time  
 Qualification : M.SC. M. TECH.  
 Appointment/ : 21-JUN-96 30-SEP-17  
 Termination date

## Geologist

Name : B.K.GANGAWAT, Full Time  
 Qualification : M.SC.(GEOLOGY)  
 Appointment/ : 30-SEP-17  
 Termination date

## Manager

Name : Naval Kishore Sharma  
 Qualification : B. E. Mining, FCC (R)  
 Appointment/ : 15-DEC-11  
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining : Mining Scheme rule 12 MCDR1988 25-MAY-00  
 Modif.approved Mining Scheme 23-SEP-04  
 Mining Scheme rule 12 MCDR1988 03-MAR-05  
 Modif.approved Mining Scheme 28-NOV-05  
 Renewal under rule 24 MCR1960 20-NOV-13  
 Renewal under rule 24 MCR1960 20-NOV-13

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

## Exploration :

| Sl.No. | Item  | Proposals            | Actual work   | Remarks  |
|--------|---|----------------------|---|--|
| 1a     | Backlog of previous year  | No proposal          | NIL   |  |
| 1b     | Exploration over lease area for geological axis 1 or 2              | No proposal          | 1516 Meters of Core Drilling done covering 14 Bore Holes.         |  |
| 1c     | Exploration Agencies and Expenditure in lakh rupees during the year | Not proposed         | M/s B.K.Diamond core drilling associates.Pvt. ltd.<br>17.05 Lachs |  |
| 1d     | Balance area to be explored to bring Geological axis in 1 or 2      | No proposal          | None  |  |
| 1e     | Balance reserve as on 01/04/20                                      | No specific proposal | Cat. 111---236.91 Million tonne<br>121---23.35 Million tonne      |  |
| 1f     | General remarks of inspecting officers on geology, exploration etc  |                      |   | There was no proposal of exploration given in the approved mining plan. But lessee has carried out exploration by drilling 14 hole with total meterage of 1516 meter |

## Development :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

|    |   |   |  |   |
|----|---|---|--|---|
| 2a | Location of development w.r.t.lease area  | Pit No. Bench Row Column<br>PIT-1 III C-D 22-31<br>IV D-P 22-31<br>VI G-M 2-9<br>G-H 12-20<br>C 13-20<br>PIT-1A II N-R 34-43<br>PIT-2 I &II AA-DD 85-90<br>II DD-KK 94-97<br>III AA-EE 91-94<br>IV X-Y 77 - 83<br>PIT-2A II X-HH 97-102 | Pit-1 - C-D 22-24, D-P 22-30, G-M 2-9, G-H 12-20, C-13-20<br>PIT-1A- In place of IInd bench with floor RL of 426, two benches i.e. IInd & IIIrd with floor RL of 417 developed.<br>PIT-2- between 84 to 91, proposed to development upto 3rd bench with floor RL 417,but development upto Vth bench with floor RL 399 has been carried out.<br>PIT-2A- proposed to develop IInd bench with floor RL 426, but development upto IVth bench has been carried out. | Vilation of rule 11(1) of MCDR, 2017 has been pointed out   |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15)                          | Proposal given for Separate benching of Top soil, OB & mineral is given.  | Separate benches of Top soil, OB & mineral has been formed.  |   |
| 2c | Stripping ratio or ore to OB ratio  | 1:0.30 (Tonnes/Tonnes )   | 1:0.50 (Tonnes/Tonnes)   |   |
| 2d | Quantity of topsoil generation in m3  | 182500 m3   | 32500 m3   |   |
| 2e | Quantity of overburden generation in m3   | 802798 m3   | 750906 m3  |   |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc |   |  | Development has not been carried out as per approved proposal. Violation of rule 11(1) of MCDR,2017 has been pointed out. |

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**Exploitation:**


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| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

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|----|---|--|---|--|
| 3a | Number of pit proposed for production                             | Pit No. Bench Row Column<br>PIT-1 III C-D 22-31<br>IV D-P 22-31<br>VI G-M 2-9<br>G-H 12-20<br>C 13-20<br>PIT-1A II N-R 34-43<br>PIT-2 I & II AA-DD 85-90<br>II DD-KK 94-97<br>III AA-EE 91-94<br>IV X-Y 77 - 83<br>PIT-2A II X-HH 97-102 | Pit-1 - C-D 22-24, D-P 22-30, G-M 2-9, G-H 12-20, C-13-20<br>PIT-1A- In place of IInd bench with floor RL of 426, two benches i.e. IInd & IIIrd with floor RL of 417 developed.<br>PIT-2- between 84 to 91, proposed to development upto 3rd bench with floor RL 417, but development upto Vth bench with floor RL 399 has been carried out.<br>PIT-2A- proposed to develop IInd bench with floor RL 426, but development upto IVth bench has been carried out. |  |
| 3b | Quantity of ROM mineral production proposed                       | 10869565 Tonne   | 9683358 Tonne   |  |
| 3c | Recovery of saleable/usable mineral from ROM production           | 10,000,000 Tonne   | 9124410 Tonne   |  |
| 3d | Quantity of mineral reject generation                             | 869565 Tonne   | 558948 Tonne  |  |
| 3e | Grade of mineral rejects generation and threshold value declared. | <34% CaO   | 25.20% to 33.10% of CaO   | Clay fraction separated from Limestone by mechanical screening |
| 3f | Quantity of sub grade mineral generation.                         | No proposal  | NIL   |  |
| 3g | Grade of sub grade mineral generation                             | Not proposed   | No generation of sub-grade  |  |
| 3h | Manual / Mechanised method adopted for segregating from ROM       | Mechanised   | Mechanised  |  |

|    |  |   |   |
|----|--|---|---|
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.      | No proposal   | None  |
| 3j | Provision of drilling and blasting in mineral benches  | Drill size: 115mm<br>Drilling & blasting in Burden & spacing of 4-5m & 6-7m respectively                        | Drill size: 115mm<br>Drilling & blasting in Burden & spacing of 4-5m & 6-7m respectively    |
| 3k | Provision of mining machineries in mineral benches   | Mining in mineral benches fully mechanised by HEMM i.e. Shovel, dumper, dozer, etc.                             | Mining in mineral benches fully mechanised by HEMM i.e. Shovel, dumper, dozer, etc.         |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | Height of benches: 9.0 - 11.0m  | Yes,<br>Height of benches: 9.0 - 11.0m  |
| 3m | Total area covered under excavation/pits   | 238.07 Ha.  | 188.7 Ha.   |
| 3n | Ore to OB ratio for the pit/mine during the year.  | 1:0.30<br>(Tonnes/Tonnes )  | 1:0.50 (Tonnes/Tonnes)  |
| 3o | Total area put in use under different heads at the end of year                                       | Pit- 238.07Ha.<br>Waste/reject- 38.48Ha<br>Others- 9.12Ha.  | Pit-188.7 Ha.<br>Waste/reject-39.070Ha.<br>Others-6.0Ha.                                    |
| 3p | Production of ROM mineral during the last five year period as applicable                             | 2013-14<br>10101355<br>2014-15<br>10869565<br>2015-16<br>10869565<br>2016-17<br>10869565<br>2017-18<br>10869565 | 2013-14 5584160<br>2014-15 6693380<br>2015-16 8511583<br>2016-17 7991770<br>2017-18 9683358 |

|    |   |  |
|----|---|--|
| 3q | General remarks of inspecting officers on method of mining etc. | Mining is being carried out by mechanised method using HEMM i.e. Shovel, dumper, dozer, etc. |
|----|---|--|

## Solid Waste Management - Dumping:

| Sl.No. | Item   | Propasals  | Actual work  | Remarks  |
|--------|--|--|--|--|
| 4a     | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)   | Proposal is given                                  | Separate dumping of topsoil,ob and Mineral reject is being carried out.            |  |
| 4b     | Location of topsoil, OB and mineral reject dumps                   | Proposed out side UPL                              | Dumping of topsoil,ob and Mineral reject is being carried out at designated place. |  |
| 4c     | Number of dumps within lease area and outside of lease area        | Five dumps within lease area                       | Five dumps within lease area   |  |
| 4d     | Location of dumps w.r.t. ultimate pit limit (Rule 16)              | All dumps are proposed outside ultimate pit limit. | All dumps are located outside ultimate pit limit.                                  |  |
| 4e     | Number of active and alive dumps.                                  | Four dumps are active                              | Four dumps are active  |  |
| 4f     | Number of dead dumps.  | One mature dumps                                   | One mature dumps   |  |
| 4g     | Number of dumps established.                                       | One mature dumps                                   | One mature dumps   |  |
| 4h     | Whether Retaining wall or garland drain all along dumps are there. | Proposed   | Retaining wall is all along the dump   |  |
| 4i     | Length of Retaining wall or garland drain all along dumps          | Not proposed                                       | 800 Meters of Retaining wall constructed.  |  |
| 4j     | Number of settling ponds   | Not proposed                                       | None   |  |
| 4k     | Specific comments of inspecting officer on waste dump management   |  |  | Terracing has been done for stabilisation & rehabilitation of dumps. |

## 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 proposed            | Not applicable as the pits are active              |  |
| 5b     | Area under backfilling of mined out area  | Not proposed            | None   |  |
| 5c     | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)     | Proposed for plantation | Top soil used for plantation                       |  |
| 5d     | Total area fully reclaimed and rehabilitated  | Not proposed            | No area is mature for reclamation & rehabilitation |  |
| 5e     | General remarks of inspecting officers on backfilling and reclamation etc.                    |                         |  | Back filling was not proposed because pits are active and no mature area is available for back filling |

## 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). | Annual report for the year 2017-18 has been submitted | Annual report for the year 2017-18 has been submitted |         |
| 6b     | Area available for rehabilitation (ha) .                                     | Not proposed  | None  |         |
| 6c     | afforestation done (ha).   | 6.0 Ha.   | 6.0 Ha.   |         |
| 6d     | No. of saplings planted during the year                                      | 9000 nos  | 9000 nos  |         |
| 6e     | Cumulative no .of plants   | No specific proposal                                  | 200885 upto 2017-18                                   |         |
| 6f     | Any other method of rehabilitation   | Not proposed  | None  |         |



|    |  |              |   |
|----|--|--------------|---|
| 6g | Cost incurred on watch and care during the year  | Rs.27 lacks  | 23.67 lacls                                       |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D | Not proposed | Not applicable, as the mining pits are not mature |
| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings          | Not proposed | Not applicable, as the mining pits are not mature |
| 6j | Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area          | Not proposed | Not applicable, as the mining pits are not mature |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir  | Not proposed | Not applicable, as the mining pits are not mature |
| 6l | Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.                   | Not proposed | Not applicable, as the mining pits are not mature |
| 6m | Compliance of rehabilitation of waste land within lease (i)afforestation                                   | 9000 sapling | 9000 sapling                                      |
| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)                       | 6.00 ha      | 6.00 ha   |

|    |   |  |   |   |
|----|---|--|---|---|
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation             | By Plantation                                    | By Plantation   |   |
| 6p | Compliance of environmental monitoring (core zone and buffer zone)                                | Regular monitoring in core zone and buffer zone. | Regular monitoring of Ambient Air Quality, Water Quality, Noise level in core zone and buffer zone. |   |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. |  |   | Regular monitoring of Ambient Air Quality, Water Quality, Noise level in core zone and buffer zone is being carried out by 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                           | 10869565 Tonne                      | 9683358 Tonne                       |  |
| 7b     | Method of grade-wise mineral sorting i.e. manual or mechanical.                        | Screening process                   | Screening process                   |  |
| 7c     | Different grade of mineral sorted out at mines.  | Cement grade & clay/reject(CaO<34%) | Cement grade & clay/reject(CaO<34%) |  |
| 7d     | Any beneficiation process at mines   | By screening                        | By screening                        |  |
| 7e     | General remarks of inspecting officer on Mineral conservation and beneficiation issues |                                     |                                     | No specific issue reported related to mineral conservation. The low grade limestone is being used by blending with high grade limestone. |

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Environment:

| Sl.No. | Item  | Propasals  | Actual work   | Remarks   |
|--------|---|--|---|---|
| 8a     | Separate removal and utilization of topsoil (Rule 32)   | Proposal given   | Top soil has been removed separately & utilised fo plantation   |   |
| 8b     | Concurrent use or storage of topsoil  | Used for planataion                                    | Used for planataion   |   |
| 8c     | Separate dumps for overburden, waste rock, rejects and fines (Rule 33)                                      | Proposal given   | Separate dumps of OB, Waste rock & reject is being done .   |   |
| 8d     | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use           | Proposal given   | Clay separated from ROM mineral used for plantation in waste land/barren land   |   |
| 8e     | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | Plantation in waste land/barren land                   | Plantation in waste land/barren land  |   |
| 8f     | Baseline information on existence of plantation and additional plantation done (Rule 41)                    | Plantation in waste land/barren land                   | 9000 nos. of saplings planted over an area of 6.0 ha. Out of which 6480 nos. of plants have survived with survival rate of 71.0%. |   |
| 8g     | Survival rate   | 85%  | 71%   |   |
| 8h     | Water sprinkling on roads to control airborne dust  | By water tankers as well as automatic water sprinklers | By water tankers as well as automatic water sprinklers  |   |
| 8i     | General remarks of inspecting officer on aesthetic beauty in and around mines area                          |  |   | Aesthetic beauty in and around mine is good except land degradation by excavation of pits & dumps. Lessee is taking care of that. |

| Sl.No. | Item  | Propasals  | Actual work  | Remarks   |
|--------|---|--|--|---|
| 9a     | Status of submission of Monthly and Annual returns  | M.R. submitted up to January-2019<br>A.R. Submitted for 2017-18. | M.R. submitted up to January-2019<br>A.R. Submitted for 2017-18. | The short comming observed has been pointed out by violation letter |
| 9b     | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager           | Details given  | Name of mining engineer & geologist given                        |   |
| 9c     | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Details given  | Pit- 188.7 Ha.<br>Dump- 39.07 Ha.                                |   |
| 9d     | Scrutiny of Annual return on afforestation  | Information given  | 9000 sapling planted during the year 2017-18                     |   |
| 9e     | Scrutiny of Annual return on mineral reject generation (Grade and quantity)                   | Information given  | 5,58948 Tonnes (25.20% to 33.10% of CaO)                         |   |
| 9f     | Scrutiny of Annual return on ROM stock and/or graded ore                                      | Information given  | Details are given  |   |
| 9g     | Scrutiny of Annual return on sale value, Ex. Mine price and production cost                   | Information given  | Ex-mine price is Rs. 186.90/ tonne                               |   |
| 9h     | Scrutiny of Annual return on fixed assets   | Information given  | Value of fixed Assets is Given as Rs. 1139203555                 |   |
| 9k     | Scrutiny of Annual return on mining machineries   | Information given  | Details of machinery given in Sec 5/6/8/9 of the AR.             |   |

**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)    | 01-FEB-19 | 02-APR-19     |                     |           |               |
| MCDR17             | Rule 45(7)(a) | 01-FEB-19 | 02-APR-19     |                     |           |               |

**Date :**

(DR A Z KHAN)

Indian Bureau of Mines