

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

**MCDR inspection REPORT
Jabalpur regional office**

Mine file No : MP/SATNA/LST-185 (772.067 ha)

Mine code : 38MPR35287

- (i) Name of the Inspecting : **G005**) **SANJAY M. GIRHE**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine :
Official with
Designation
- (iv) Date of Inspection : 01-SEP-21
- (v) Prev.inspection date : 12-FEB-21

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **PRISM CEMENT (772.067 HA.**
- (b) **Registration NO.** : **IBM/267/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : MADHYA PRADESH
District : SATNA
Village : HINOUTI & SIJAHATA
Taluka : RAMPUR BAGHELAN
Post office : BATHIYA
Pin Code : 485111
FAX No. : (O) 07675 - 227514 (W) 275:
E-mail : amit.biswas@prismjohnson.i
Phone : (O) 07675 - 504403
- (f) Police Station : Kolgawan
- (g) First opening date : 25-MAY-85
- (h) Weekly day of rest : SUN
2. Address for : M/S PRISM CEMENT LIMITED
correspondance : RAJDEEP, REWA ROAD, SANTA (M.P.) 485001
3. (a) Lease Number : MPR2361
- (b) Lease area : 772.07
- (c) Period of lease : 40
- (d) Date of Expiry : 24-MAR-25
4. Mineral worked : LIMESTONE Main

5. Name and Address of the

Lessee : PRISM CEMENT LTD.
RAJDEEP, REWA ROAD, SATNA
MADHYA PRADESH
Phone:(O) 07675 - 504403
FAX : (O) 07675 - 227514 (W) 275303

Owner : PRISM CEMENT LIMITED
PRISM CEMENT LTD. SATNA
MADHYA PRADESH
Phone: N. A.
FAX : N. A.

6. Date of approval of Mining : Mining Scheme rule 12 MCDR1988 06-APR-15
Plan/Scheme of Mining MP review under 17(1) MCR 2016 31-MAR-20

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|---|---|---|--|
| 1a | Backlog of previous year | 58 Bore holes proposed. The exploration level under G1 have already been carried out within the entire ML. An exploration program is being proposed to cross checking earlier exploration | 58 Boreholes drilled | Lessee having his own exploration team with two Crawler mounted Hydrostatic core drilling machine (Kores KDR 150 & KDR200) |
| 1b | Exploration over lease area for geological axis 1 or 2 | 58 Bore holes proposed. | Total 3602 m drilling carried out for G1 level of exploration | Exploration carried out in-hously by Prism Johnson Limited exploration team |
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | Proposed as about 50 Lakhs | About Rs 45 Lakhs incurred on exploration | Exploration carried out in-hously by Prism Johnson Limited exploration team |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | 58 Bore holes proposed. | Exploration carried out as per the proposals. Entire mineralised area explored in G1 level | Further, exploration for second limestone band may be required |
| 1e | Balance reserve as on 01/04/20 | Reserves in Million Tonnes Proved(111) - 57.62 Resources in million Tonnes Pre-Feasibility(21): 32.27 As per ROMP approved on 31.03.2020 | Reserves in Million Tonnes Proved(111) -56.47 Resources in million Tonnes Pre-Feasibility(221): 28.56 As per Annual Return for the year 2020-21 | No additional reserves/resources have been estimated |

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| 1f | General remarks of inspecting officers on geology, exploration etc | NA | NA | The exploration level under G1 have already been carried out within the entire ML for first limestone band. An exploration program is proposed to further exploration of second limestone band. |
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Development :

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|---|--|--|
| 2a | Location of development w.r.t.lease area | Working proposal in 2 locations a) Between coordinates - 200 to -300 N & 1900 to 2250 E b) Between coordinates - 1580 to -1695 N & 3200 to 3350 E | Actual work is also conforms the proposal c) Between coordinates - 217 to -291 N & 1937 to 2227 E Between coordinates - 1580 to -1695 N & 3200 to 3350 E | The actual woking is well within the proposal |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | Separate bench for top soil & OB proposed during the year | Separate bench for top soil & OB maintained | The top soil is removed by excavator & the OB requires drilling + blasting |
| 2c | Stripping ratio or ore to OB ratio | 1:0.58 tonne/CuM | 1:0.53 tonne/CuM acheived | Actual OB is little lesser than proposed |
| 2d | Quantity of topsoil generation in m3 | 162328 m3 | 32250 m3 | The Capacity enhancement is under progress from 0.825 MTPA to 3.0 MTPA |

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| 2e | Quantity of overburden generation in m3 | 1343772 m3 | 408196 m3 | The Capacity enhancement is under progress from 0.825 MTPA to 3.0 MTPA |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | NA | NA | The present EC capacity is 0.825 MTPA, enhancement is applied and the mining plan has been prepared for higher capacity for the EC enhancement. |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|---------------------------------------|---|
| 3a | Number of pit proposed for production | Excavation proposed in 03 nos of pits | Working carried out in 02 nos of pits | The third pit location requires working below the GWT for which NOC from CGWA is applied & still awaited. |
| 3b | Quantity of ROM mineral production proposed | 2584726 MT | 8,24,893 MT | The Capacity enhancement is under progress from 0.825 MTPA to 3.0 MTPA |
| 3c | Recovery of sailable/usable mineral from ROM production | 2584726 MT mineral reject=0 , as the entire ROM will be used for clinker/cement production, no beneficiation process is involved. The ROM is proposed considering 90% recovery factor in limestone | 8,24,893 MT | The Capacity enhancement is under progress from 0.825 MTPA to 3.0 MTPA |

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| 3d | Quantity of mineral reject generation | No Proposals | Nil | The Entire ROM is consumed for clinker production |
| 3e | Grade of mineral rejects generation and threshold value declared. | No Proposals | Nil | The Entire ROM is consumed for clinker production |
| 3f | Quantity of sub grade mineral generation. | No Proposals | Nil | The Entire ROM is consumed for clinker production |
| 3g | Grade of sub grade mineral generation | No Proposals | Nil | The Entire ROM is consumed for clinker production |
| 3h | Manual / Mechanised method adopted for segregating from ROM | Not Proposed | No Segregation | The Entire ROM is consumed for clinker production |
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | Not Proposed | Nil | The Entire ROM is consumed for clinker production |
| 3j | Provision of drilling and blasting in mineral benches | Deep Hole Drilling & Blasting proposed | Deep Hole Drilling & Blasting being practised | DGMS Permission available |
| 3k | Provision of mining machineries in mineral benches | Excavator (L&T -3.9CuM, Volvo-0.92CuM, Tata Hitachi-4 CuM) Haul Pack (BH40, CAT772) of 40/50 tonnes Rock Breaker-1.6CuM Dozer (BEML) Atlas Copco-110mm dia Pump | Excavator (L&T -3.9CuM, Volvo-0.92CuM, Tata Hitachi-4 CuM) Haul Pack (BH40, CAT772) of 40/50 tonnes Rock Breaker-1.6CuM Dozer (BEML) Atlas Copco-110mm dia Pump | DGMS Permission available |

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| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | As per proposal, Maximum 8 m | Being maintained as per the proposals | DGMS Permission upto 9 m bench height sought by the lessee |
| 3m | Total area covered under excavation/pits | Proposed as 187.98 Ha | 143.638 Ha | The Capacity enhancement is under progress from 0.825 MTPA to 3.0 MTPA |
| 3n | Ore to OB ratio for the pit/mine during the year. | 1:0.58 Tonne/CuM | 1:0.53 Tonne/CuM | Actual OB is little lesser than proposed |
| 3o | Total area put in use under different heads at the end of year | 157.76 Ha | 156.14 Ha | As per the approved proposals |
| 3p | Production of ROM mineral during the last five year period as applicable | 2016-17 : 825000 tonnes 2017-18 : 825000 tonnes 2018-19 : 825000 tonnes 2019-20 : 825000 tonnes 2020-21 : 825000 tonnes | 2016-17 : 823177 2017-18 : 824850 2018-19 : 824775 2019-20 : 824932 2020-21 : 824893 | The Capacity enhancement is under progress from 0.825 MTPA to 3.0 MTPA |
| 3q | General remarks of inspecting officers on method of mining etc. | NA | NA | Fully Mechanised open cast working proposed by using Excavator & dumper combination with deep drilling & blasting being practised. |

Solid Waste Management - Dumping:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|-------------------------------------|--------------------------------------|-----------------------------------|
| 4a | Separate dumping of topsoil, OB and mineral rejects (Rule 32,33) | Concurrent backfilling is proposed. | Concurrent backfilling is being done | Very old mines running from 1996. |

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| 4b | Location of topsoil, OB and mineral reject dumps | Concurrent use for backfilling proposed | Concurrent backfilling carried out as proposed | |
| 4c | Number of dumps within lease area and outside of lease area | Old 3 Soil Dump inside the lease | old 3 Soil Dump inside the lease | Old inactive dumps already rehabilitated by dense plantation |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Not proposed in the 2020-21 | Nil | Concurrent backfilling is being done |
| 4e | Number of active and alive dumps. | No proposals | Nil | Concurrent backfilling is being done |
| 4f | Number of dead dumps. | Old 3 Soil Dump inside the lease | Old 3 Soil Dump inside the lease | Old inactive dumps already rehabilitated by dense plantation |
| 4g | Number of dumps established. | No Proposed in 2020-21 | Nil | Concurrent backfilling is being done |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | Not Proposed | Nil | Concurrent backfilling is being done |
| 4i | Length of Retaining wall or garland drain all along dumps | Not Proposed | Nil | Concurrent backfilling is being done |
| 4j | Number of settling ponds | Not Proposed | Nil | Concurrent backfilling is being done |
| 4k | Specific comments of inspecting officer on waste dump management | NA | NA | Concurrent backfilling is being done, no active dump present , old dumps dumps already rehabilitated by dense plantation & gentle slope. |

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. | Most of working block- A & B area fully extracted for first limestone band | Most of working block-A & B area fully extracted for first limestone band | Second band limestone is still existing, backfilling proposed only at places where mining is not feasible for backfilling |
| 5b | Area under backfilling of mined out area | Proposed as 1.68 Ha | Acheived as 1.263 Ha | Concurrent backfilling is being practised at suitable locations only |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | 68792 m3 | 32250 m3 | Concurrent backfilling is being done |
| 5d | Total area fully reclaimed and rehabilitated | 40.45 Ha | 39.727 Ha | Concurrent backfilling is being done |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | Proposals drawn for systematic waste dump management and reclamation by backfilling | The lessee company undertaken terracing method of waste dumping and backfilling at suitable mined out areas. | Some of mined out area has been matured and subsequently backfilling carried out. |

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 before 1st July of every year | Yes, submitted within stipualted time | Report was produced during mines inspection |
| 6b | Area available for rehabilitation (ha) . | 59.23 Ha | 37.07 Ha | Backfilling being carried out simultanesouly |
| 6c | afforestation done (ha). | Proposed over 5.18 Ha | Carried out over about 8.0 Ha area | |

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| 6d | No. of saplings planted during the year | 12950 Nos of saplings | Acheived as 19950 in total | |
| 6e | Cumulative no .of plants | 100000 Nos | 96221 No of Saplings | |
| 6f | Any other method of rehabilitation | Proposed by Solar Power plant | Installed over 8 ha area | |
| 6g | Cost incurred on watch and care during the year | Not Proposed | Rs 1995000 | Ongoing works |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D | 1.68 Ha Void is available but OB is less as compared to the available void | 1.263 Ha, Water reservoir will be developed during the final mine closure plan | |
| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings | 1.68 Ha Void is available but OB is less as compared to the available void | 1.263 Ha Water reservoir will be developed during the final mine closure plan | |
| 6j | Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area | Not Proposed | Total plantation done is 19950 no of saplings out of which 1 Ha is over backfilling and 7 ha over barrier zone | |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir | Not Proposed | Nil | |
| 6l | Compliance on reclamation and rehabilitation by backfilling (v)any other specific means. | Not Proposed | Nil | |

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| 6m | Compliance of rehabilitation of waste land within lease (i)afforestation | Not Proposed | Nil | |
| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha) | Not Proposed | Nil | |
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation | Not Proposed | Nil | |
| 6p | Compliance of environmental monitoring (core zone and buffer zone) | Monitoring proposed Quarterly | Being carried out as per the proposals | |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | Year wise proposals given | Working carried out as per the proposals | The working is being carried out as per proposal. Solar power plat is installed in the mined out area of the lease. |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|----------------------|--|--|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | Sorting Not proposed | No Sorting is applicable. The ROM is sent directly to the crusher of the plant for clinker/cement making, no sorting or beneficiation process is involved. | The entire material upto the threshold value is being used and the quality is being maintained by sweetner addition. |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | Not Proposed | Nil | Not required |

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|----|--|-------------------------------------|-----|---|
| 7c | Different grade of mineral sorted out at mines. | Not Proposed | Nil | Not required as entire ROM being consumed as captive use |
| 7d | Any beneficiation process at mines . | Not Proposed | Nil | Not required at this stage |
| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | No Proposals of beneficiation given | Nil | Entire ROM being consumed for its captive use in cement plant. Beneficiation is not required. |

Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|---|--|---|
| 8a | Separate removal and utilization of topsoil (Rule 32) | Concurrent backfilling is proposed | Concurrent backfilling is being done | |
| 8b | Concurrent use or storage of topsoil | Concurrent use for over the backfilling area for plantation purpose | Spreaded over the backfilling for maturation | |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Concurrent backfilling is proposed | Concurrent backfilling is being done No dump created | Concurrent backfilling is being practised |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | Backfilling upto premining level | Backfilling upto premining level | Concurrent backfilling |

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| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | Previous years matured backfilling is proposed for afforestation during the year. | No Dumps created. Concurrent backfilling is being done on previous years matured area | |
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | 12950 plants proposed | 19950 saplings planted in total | |
| 8g | Survival rate | 80% | 76.23% | |
| 8h | Water sprinkling on roads to control airborne dust | By water sprinkler truck mounted | 2 Water sprinklers under operation | Mine pit accumulated water is being used for the said purpose |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | Proposals were given on each heads | Working carried out as per proposals | Reclamation and rehabilitation is being followed as proposed. Garden and picnic spot is developed by reclaiming old workings of the ML. water reservoir is being used for storing rainwater for use in summer. |

Compliance of Rule 45:

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|--|---|--|
| 9a | Status of submission of Monthly and Annual returns | M.R. submitted upto- October- 2021 A.R. submitted upto- 2020-21 | Online monthly & annual returns submitted within stipulated time. | Online submission position checked & confirm from IBM web portal |

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| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Given | Mr. Vinod Giri appointed as Mining Eng. and Mr. Amit Biswas as Geologist | Both Mining Eng. & Geologist were present during inspection |
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Given | Already abandoned - 51.59Ha Working pits area-52.32 Ha Reclaimed/Rehabilitated - 39.77Ha Waste Dumps-4.72Ha Infrastructure-5.50Ha | |
| 9d | Scrutiny of Annual return on afforestation | Given | 19950 Nos. saplings planted in ML area & 889944 nos. planted outside ML area | |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | Not Given | Nil | No mineral rejects generated during the year |
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | Given | Cement Grade Limestone: O/S-Nil Despatch-824893 Ha C/S-Nil | Entire production of limestone being consumed in captive cement plant |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | Given | Rs-270.23 | Captive consumption |
| 9h | Scrutiny of Annual return on fixed assets | Given | Rs 1059160881 | Given in respect of the mine, crushing plant, mine workshop, power and water installation, land cost, etc |
| 9k | Scrutiny of Annual return on mining machineries | Given | Nil | Nil |

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 |

Date :**(SANJAY M. GIRHE)**

Indian Bureau of Mines