

INSPECTION REPORT

1.0 GENERAL

| SN | Particulars | Details |
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| 1(a) | Name of the Mine | Kenedy Bauxite Mine, Survey No-506(P) of M/s Bharat Abrasive & Chemical Ind. |
| 1(b) | Name of Inspecting Officer & Designation | Sanjay M. Girhe, Sr. Mining Geologist |
| 1(c) | Accompanying Mines Representatives | Sh. S K Upadhyay, Mines Agent & Sh Vivek Shah, Geologist |
| 1(d) | Type of Inspection | Mining Plan |
| 1(e) | Date of Inspection | 01.11.2017 |
| 2 | Total Lease Area (Ha) with breakup of Non-forest and forest land | Total Lease area- 32.375 ha (Non forest land) |
| 3 | Minecode | 07GUJ07015 |
| 4 | IBM Registration Number under rule 45 of MCDR, 1988 | IBM/4988/2011 |
| 5 | Name of the lessee, Address, phone, email and fax number | M/s. Bharat Abrasives & Chemical Industries. M/s. Bharat Abrasives & Chemical Industries Prabhu Chamber,1 Shreeji Palace, Porbandar - 306575, Dist. Porbandar Pincode-360575, Email- bacikenedy@gmail.com |
| 6 | Village | Kenedy |
| 7 | Taluka/Mandal | Kalyanpur |
| 8 | District | DevbhumiDwarka |
| 9 | Pincode | 361305 |
| 10 | State | Gujarat |
| 11 | Post office | Bhatia |
| 12 | Nearest police station | Bhatia |
| 13 | Nearest Railway station | Bhatia |
| 14 | Date of Grant of Mining Lease | 07/07/1979 |
| 15 | Date of Execution | 16/10/1979 |
| 16 | Date of opening of Mine | 16/10/1979 |
| 17 | Date of first Renewal, if applicable and its period & expiry | 15/10/1998 |
| 18 | Date of second Renewal, if applicable and its period & expiry | NA |
| 19 | Date of submission of renewal application if Mining Operations are continuing under deemed extension | NA |
| 20 | Name of the Nominated Owner with Address, phone, email, fax number and date of appointment | Name of the Nominated Owner- Mr. Bharat Kumar P Makhecha Address- M/s. Bharat Abrasives & Chemical Industries Prabhu Chamber,1 Shreeji Palace, Porbandar - 306575, Dist. Porbandar Pincode-360575, Email- bacikenedy@gmail.com |
| 21 | Name of the Mine Agent with Address, phone, email, fax number and date of appointment | Name of the Mine Agent- Mr. Dhwanil Antani Address- M/s. Bharat Abrasives & Chemical Industries Prabhu Chamber,1 Shreeji Palace, Porbandar - 306575, Dist. Porbandar Pincode-360575, Email- bacikenedy@gmail.com |
| 22 | Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines | Name of the Mines Manager- Mr. Joshi Jitesh Maganlal Address- M/s. Bharat Abrasives & Chemical Industries Prabhu Chamber,1 Shreeji Palace, Porbandar - 306575, Dist. Porbandar Pincode-360575, Email- bacikenedy@gmail.com |
| 23 | Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine | Name of the Mining Engineer- Mr. Joshi JiteshMaganlal Qualification- Diploma In Mining Engineering Total experience-15 Years Address- M/s. Bharat Abrasives & Chemical Industries |

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| | | Prabhu Chamber,1 Shreeji Palace, Porbandar - 306575, Dist. Porbandar Pincode-360575 Email- bacikenedy@gmail.com Date of Appointment-20/11/2016 |
| 24 | Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57. | Mr. Joshi JiteshMaganlal as Mining Engineer and Mr Satpal Singh Raghuwanshi as a Geologist appointed to satisfy the rule 55 & carrying out their duties as per rule 56 & 57 of MCDR,2017. |
| 25 | Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any. | Mining Plan approved vide letter No-682(23)(908/99)MCCM(N)UDP dtd 15.12.99 Mining Plan period-1998 to 2003 No specific condition in approved Mining Plan |
| 26 | Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any. | Date of Approval of Scheme of Mining- 11/02/2015 Five-year period-2015 to 2019 No specific condition in approved Scheme of Mining |
| 27 | Mineral(s) granted in lease and proved for mining | Bauxite |
| 28 | Method of Mining(Open cast, Underground) | Open cast |
| 29 | Category (Fully Mechanised, Others or Manual) | Category A OTFM |
| 30 | Captive/Non Captive | Captive |

Scientific Mining: Compliance of proposals of approved mining plan/scheme of mining. –

Exploration

| SN | Item | Proposals (2016-17) | Actual work (2016-17) | Remarks |
|----|---|---|---|---------|
| 1a | Backlog of previous year | No Proposals / Nil | The area was fully explored by 34 boreholes and 21 pits. | |
| 1b | Exploration over lease area for Geological axis 1 or 2. | Not Proposed | Therefore, no exploration proposed | |
| 1c | Exploration Agency & Expenditure in lakh Rupees during the year | No exploration was proposed during the year 2016-17 | Previous Exploration was carried out by the agency lessee himself has done exploration work M/s. Bharat Abrasives & Chemical Industries Prabhu Chamber,1 Shreeji Palace, Porbandar - 306575, Dist. Porbandar Pincode-360575 Email- bacikenedy@gmail.com | |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | Not Proposed | The area was fully explored by 34 boreholes and 21 pits. Therefore, no exploration proposed | |
| 1e | Balance reserves as on 01.04.2016 | Total Mineral reserve 1)Proved Mineral Reserve(111) =31,98,200 MT 2)Probable Mineral | Total Mineral reserve 1)Proved Mineral Reserve(111) =29,23,985 MT 2) Probable Mineral | |

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| | | reserve(122) =NIL MT Total-31,98200MT | reserve(122) =NIL MT Total-29,23,985 MT | |
| 1f | General remarks of inspecting officer on geology, exploration etc. | All the explorations carried out properly in the past and it is highlighted in approved Scheme of Mining | | |

2.0 Development

| SN | Item | Proposals (2016-17) | Actual work (2016-17) | Remarks |
|----|---|--|--|---------|
| 2a | Location of development w.r.t. lease area | In the year 2016-17 north side of the Lease area near pit no. 18 | Mine working done as per the proposed locations & also worked in other area partly where no proposals were given | |
| 2b | Separate benches in topsoil, overburden and mineral (Rule 15) | Top soil = NIL OB= NIL Mineral Bauxite = 4.5 | Top soil = NIL OB= NIL Mineral Bauxite = 4.5 | |
| 2c | Stripping ratio or ore to OB ratio | 1:0.05 | 1:0.05 | |
| 2d | Quantity of topsoil generation in m ³ | NIL | NIL | |
| 2e | Quantity of overburden generation in m ³ | 10450 M ³ | NIL | |
| 2f | General remarks of inspecting officer on development of pit w.r.t. type of deposit etc. | Nil | | |

3.0 Exploitation

| SN | Item | Proposals (2016-17) | Actual work (2016-17) | Remarks |
|----|---|---|---|--|
| 3a | Number of pits proposed for production | In Pit 18 by formation of 2 benches & in some other pit area as earmarked on plate-4B | Mine working during the year carried out on proposed locations with some variation where no proposals were given. | Total 21 working pits are existing in ML area. |
| 3b | Quantity of ROM mineral production proposed | 522975 MT | 993 MT | |
| 3c | Recovery of salable/usable mineral from ROM production | Not proposed | NIL | |
| 3d | Quantity of mineral reject generation | Not proposed | NIL | |
| 3e | Grade of mineral reject generation and threshold value declared | No mineral rejects. Threshold value Min 30% of Al ₂ O ₃ | No mineral rejects generated as material is being consumed up to threshold value of 30% of Al ₂ O ₃ | |
| 3f | Quantity of sub-grade mineral generation | Not Proposed | NIL | |
| 3g | Grade of sub-grade mineral generation | Not Proposed | NIL | |
| 3h | Manual / Mechanised method adopted for segregating from ROM | Manual | Manual | |
| 3i | Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject | Not Proposed | No such study carried out by the lessee | |
| 3j | Provision of drilling & blasting in mineral benches | As per required used through other agency for | As per required used through other agency | |

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| | | blasting | for blasting. Jack Hammer drilling & blasting is done if required | |
| 3k | Provision of mining machineries in mineral benches | Proposed mining machineries Excavator, tipper & dumper | Actual working mining machineries Excavator, tipper & dumper used. | |
| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | 4.5mtr. | 4.5 to 5.0 mtr. Achieved during proposed working | |
| 3m | Total area covered under excavation/pits | In 2016-17 proposed area 28412m ² | In 2016-17 very less quantity of production achieved so area is not degraded that much | |
| 3n | Ore to OB ratio for the pit/mine during the year | 1:0.05 | 1:0.05 | |
| 3o | Total area put in use under different heads at the end of year | Pit-10.99 Ha Waste dumps-0.436Ha Road-0.8 Ha Others-0.35Ha | Pit-10.39 Ha Waste dumps-0.436Ha Road-0.8 Ha Others-0.35Ha | |
| 3p | Production of ROM mineral during last five-year period, as applicable | Yr-2012-13: 580400 MT Yr-2013-14: 596700 MT Yr-2014-15:- NIL Yr-2015-16: 594250 MT Yr-2016-17: 522975 MT | 2012-13 = 5630 MT 2013-14 = 196042 MT 2014-15 = NIL 2015-16 = 273222 MT 2016-17 = 993 MT | |
| 3q | General remarks of inspecting officer on method of mining etc. | Nil | | |

4.0 Solid Waste Management-Dumping

| SN | Item | Proposals (2016-17) | Actual work (2016-17) | Remarks |
|----|---|---|---|---------|
| 4a | Separate dumping of topsoil, OB & mineral reject (Rule 32, 33) | Lease area is devoid of top soil but separate stacking of lateritic OB proposed & earmarked on plate-4B | Worked as per the given proposals but partly deviated due less OB generation during the year | |
| 4b | Location of topsoil, OB & mineral reject dumps | Location OB dumping proposed | Worked as per the given proposals but partly deviated due less less OB generation during the year | |
| 4c | Number of dumps within lease area and outside lease area | Within the lease area | OB dumps-1 Mineral stacks-2 | |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Separate waste dumping earmarked in Plate-3 &4A to 4E | NIL | |
| 4e | Number of active & alive dumps | Not in proposal | NIL | |
| 4f | Number of dead dumps | Not in proposal | NIL | |
| 4g | Number of dumps stabilised | Not in proposal | NIL | |
| 4h | Whether Retaining wall or garland drain all along dumps are there | Not in proposal | NIL | |
| 4i | Length of Retaining wall or | Not in proposal | NIL | |

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| | garland drain all along dump | | | |
| 4j | Number of settling ponds | Not in proposal | NIL | |
| 4k | Specific comments of inspecting officer | Nil | | |

5.0 Solid Waste Management-Backfilling

| SN | Item | Proposals (2016-17) | Actual work (2016-17) | Remarks |
|----|--|---------------------|--|---------|
| 5a | Status on part or full extraction of mineral from mined out area before starting backfilling | 10450 CuM | Not done due to less production achieved during the year | |
| 5b | Area under backfilling of mined out area | 1810 M ² | NIL | |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32) | Not in proposals | NIL | |
| 5d | Total area fully reclaimed & rehabilitated | 0.254 Hect. | NIL | |
| 5e | General remarks of inspecting officer on backfilling, reclamation etc | Nil | | |

6.0 Progressive Mine Closure Plan

| SN | Item | Proposals (2016-17) | Actual work (2016-17) | Remarks |
|----|---|--|--|---------|
| 6a | Whether Annual report on PMCP submitted on time and correctly - Rule 23E(2). | Yes | Yes submitted Annual report on PMCP in time. | |
| 6b | Management of worked/mined out benches i) Area available for rehabilitation (ha) ii) Afforestation done (ha) iii) No. of saplings planted during the year iv) Cumulative no. of plants v) Any other specific method of rehabilitation vi) Cost incurred on watch & care during the year | Not proposed | NIL | |
| 6c | Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means | Year 2016-17 i) 0.254 Hect ii) 0.02 Hect iii) 50 Saplings iv) 0.25 Hect. (for five year) v) - vi) - | Year 2016-17 NIL 0.02 Hect. 100 Saplings 0.45 Ha (cumulative to till) | |
| 6d | Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation | NIL | NIL | |

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| 6e | Compliance of Environmental monitoring (core zone & buffer zone) | Ambient air quality | One | Ambient Air Quality Monitoring done Quarterly once in year(Except Monsoon Season) Water analysis done quarterly once in a year Noise measurement done quarterly once in a year (Except Monsoon Season) |
| | | Water Quality | One | |
| | | Noise Level survey | One | |
| 6f | General remarks of inspecting officer on PMCP compliance & progressive | Environmental Monitoring was given to outsource Consultant and requisite reports were submitted during inspection. | | |

7.0 Mineral Conservation

| SN | Item | Proposals (2016-17) | Actual work (2016-17) | Remarks |
|----|--|--|--|---------|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | 522975 MT, Grade-wise sorting within lease area proposed | 993 MT & Grade-wise sorting within lease area done | |
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical | Manual sorting proposed | Manual sorting done for desired grade | |
| 7c | Different grade of mineral sorted out at mines | Usually this bauxite is hand sorted within the quarry for different grade, such as abrasive grade, Ceramic grade and cement grade (Low grade). | Hand sorting within the quarry for different grade, such as abrasive grade, Ceramic grade and cement grade (Low grade) done. | |
| 7d | Any beneficiation process at mines | Not Proposed | Not Applicable | |
| 7e | General remarks of inspecting officer on Mineral conservation & beneficiation issues | Bauxite ore being consumed fully up to the threshold value i.e. 30% Al ₂ O ₃ as non-plant grade (NPG). Only 10-15% recovered as Plant grade ore generated from total ROM | | |

8.0 Environment

| SN | Item | Proposals (2016-17) | Actual work (2016-17) | Remarks |
|----|---|--|---|---------|
| 8a | Separate removal and utilization of topsoil (Rule 32) | Not Proposed | NIL | |
| 8b | Concurrent use or storage of topsoil | Not Proposed | NIL | |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | Provisions of separate stacking of OB dumps given | Very less OB generated during the year due to less production | |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | Overburden used for backfilling purposes & plantation & road repairing work proposed | Very less OB generated during the year due to less production | |
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | Yes, Proposed | Yes, implemented at mine areas. | |

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| 8f | Baseline information on existence of plantation & additional plantation done (Rule 41) | Afforestation-Each year 50 saplings are proposed over 500 m ² . Afforestation proposed over backfilled area. | Total 100 nos. of sapling in 0.05 ha over backfilled area planted | |
| 8g | Survival rate | Survival Rate- 75% Proposed | Survival Rate-Achieved 70% | |
| 8h | Water sprinkling on roads to control airborne dust | It is proposed to sprinkling water on haul road | Sprinkling of water on haul done. | |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines are | Due less availability of top soil in the lease area, afforestation programme not attended up to that extent by the lessee. | | |

9.0 Compliance of Rule 45

| S. N. | Item | COMMENTS | Remarks |
|-------|--|--|-----------|
| | Status of submission of Monthly and Annual returns | M.R. Submitted upto –Dec-2017 A.R. submitted upto- Year 2016-17 on 01.06.2017 | Submitted |

| S. N. | Item | Details GIVEN in A.R. | Observation of I/Officer | Remarks |
|-------|---|--|--|---|
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | Details of Mining Engineer & Geologist were given in Annual Return | Mr. Joshi JiteshMaganlal Date of Appointment- 20/11/2016 Mr Satpal Singh Raghuwanshi, Geologist appointed | Both Mining Engineer & Geologist were present during inspection |
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | Pit-10.99 Ha Waste dumps- 0.436Ha Road-0.8 Ha Others-0.35Ha | Pit-10.99 Ha Waste dumps-0.436Ha Road-0.8 Ha Others-0.35Ha | |
| 9d | Scrutiny of Annual return on afforestation | 50 saplings proposed with survival rate of 75% | 100 saplings planted & achieved 70% survival rate | |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade & quantity) | Not Given | NIL | |
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | ROM/NPG Stocks reported in AR: 219047MT as on 31.03.2017 | Reported in Annual Return. Further, advice to resurvey the quantity on regular interval | |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price & production cost | <u>Ex-mine Price</u> -Cement Grade-390/MT -Refractory-750?MT <u>Cost of Production</u> -Other than Plant Grade-345/MT -Plant Grade-664/MT | Cost of production was computed correctly taking into all applicable aspects like DMF, NMET, etc | |
| 9i | Scrutiny of Annual return on fixed assets | Detail of fixed assets given in Annual Return | Total fixed assets for land, industrial, etc. are furnished as Rs- 1864459000 | |

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| 9k | Scrutiny of Annual return on mining machineries | Proposed mining machineries Excavator, tipper & dumper | Actual working mining machineries Excavator, tipper & dumper used. | |
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10- Details of violations observed during current inspection and compliance position of earlier violation pointed out: -The last inspection of mine was carried out on dtd 14.09.2015 and violations of rules 13(1), 23E(2) & 42(1)(c)(i) were observed and these violation rectified by the lessee vide letter No-BACI/IBM/2015-16/520 dtd 09.01.16. This inspection was carried out for evaluation of online templates filled by the lessee for the year 2016-17. During the inspection violation of rules 11(1), 14 & 33 of MCDR,2017 were pointed for its rectification and violation letter was issued on dt 02.01.2018.
