

## MCDR INSPECTION REPORT

### 1.0 GENERAL

SN	Particulars	Details
1	Name of the Mine	Kothariya Bauxite Mine, (Sy. No.330/P)
2A	Inspecting officer with date, Type	G.Ram, Sr.ACOM, 16/2/2019 AN, Star Rating/MCDR Inspection
2B	Accompanying official	Sh. Gunanand Roy & Santosh Kaluskar
3	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total area-62.32 Ha, Non-Forest land
4	Mine code & IBM Registration Number under rule 45 of MCDR, 17	07GUJ107019 & IBM/246/2011
5	Name of the lessee, Address, phone, email and fax number	M/s Orient Abrasive Limited, Regd office- GIDC Industrial Area, Probandar, Gujarat, 9998945910, orientkhambalia@gmail.com
6	Village	Mevasa
7	Taluka/Mandal	Kalyanpur
8	District	Devbhumi Dwarka
9	Pin code	361315
10	State	Gujarat
11	Post office	Kalyanpur
12	Nearest police station	Kalyanpur
13	Nearest Railway station	Khambhalia
14	Date of Grant of Mining Lease	07-04-1981
15	Date of Execution	05-10-1981, 20 Year, Expiry-04.10.2031 as per MMDR Amendment Act,2015
16	Date of opening of Mine	01.7.2015 (Reopening)
17	Date of first Renewal, if applicable and its period & expiry	05.10.1991, Form-J 05.6.2000 submitted for renewal.
18	Date of second Renewal, period & expiry	Not applicable
19	Date of submission of renewal application / deemed extension if any	Not applicable
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Mr. Manubhai Rathod, (Managing Director), WEF-13/6/2017, Near Madhurma Society, Dharmapur, Khambhalia-Jamnagar-361305
21	Name of the Mine Agent, Address, phone, email, fax & date of appointment	Shri Gunanand Roy, WEF- 01/8/2016 M/s Orient Abrasive Ltd, Jamnagar Dwarka Highway, Khambaliya-361305 District-Devbhumi Dwarka,Gujarat, orientkhambalia@gmail.com
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri Kirti Kumar Rathor, Experience 3 Years, Appointment on date 01.09.2017, Jamnagar Dwarka Highway, Khambaliya-361305 District-Devbhumi Dwarka,Gujarat, orientkhambalia@gmail.com
23	Name of the ME, Qua. & Exp., Address, phone , email, fax, date of appointment	Shri Kirti Kumar Rathor, Experience 3 Years, Appointment on date 01.09.2017, Jamnagar Dwarka Highway, Khambaliya-361305 District-Devbhumi Dwarka,Gujarat, orientkhambalia@gmail.com
24	Whether Geologist & ME appointed in mines satisfy the rule 42, 43 & 44	Mr Santosh Kaluskar, MSc (Geology) WEF-11/8/2017 9664995667, Jamnagar Dwarka Highway, Khambaliya-361305 District-Devbhumi Dwarka,Gujarat, orientkhambalia@gmail.com
25	Date of Approval of Mining Plan /Modified Mining Plan with five-year period and specific condition in approval letter, if any.	682(23)MP-305/2004 (MCCM) (N) UDP Dated-15/5/2004 & MMP 682(23)MP-584/2007 (MCCM) (N) UDP Dated-07/11/2007
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	682(23)MS-498/2009 (MCCM) (N) UDP Dated-21/8/2009 682(23)MP-498/2009 (MCCM) (N) UDP Dated-14/8/2014 682(23)MS-498/2009 (MCCM) (N) UDP Dated-02/12/2016 for the period of 2017-18 to 2021-22
27	Mineral(s) granted in lease	Bauxite
28	Method of Mining (O/C, U/G)	Opencast
29	Category (FM, Others or Manual)	Fully Mechanized
30	Captive/Non Captive	Captive

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

**1.0 Exploration**

SN	Item	Proposals 2017-18 & 2018-19	Actual work	Remarks
1a	Backlog of previous year	Single trial pits proposed in each year	Lessee has dug single trial pit only	
1b	Exploration over lease area for Geological axis 1 or 2.	62.32Ha	G1-19.78Ha & G2-10.87Ha	G1/G2-About 30.5%
1c	Exploration Agency & Expenditure in lakh Rupees during the year	One trial pit proposed in each year	01-trial pit Done	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Not proposed	NIL	NIL
1e	Balance reserves as on 01.4.2018 (111, 121 & 122)	Proved Mineral Reserves= 2270354 MT, Probable Mineral Reserves = 1346351 MT, Total = 3616705 MT (Plant & Non-plant grade)		
1f	General remarks of inspecting officer	Entire lease area is not explored in G1/G2 level of exploration; presently mine is not working in full scale.		

**1.0 Development**

SN	Item	Proposals 2017-18 & 2018-19	Actual work	Remarks
2a	Location of development w.r.t. lease area	It was proposed to work in Pit No.2 in 2017-18 & Pit No.3 in 2018-19 as earmarked in plate No 6	Partly done as proposed, lagging in production achievement lateral & depth also.	Lagging in production due to less plant requirement. Total-13 pits of variable size & depth are there.
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Proposed	Maintained separately benches.	
2c	Stripping ratio or ore to OB ratio	1:0.8	1:0.07	
2d	Quantity of topsoil generation in m <sup>3</sup>	7950M <sup>3</sup> & 8945M <sup>3</sup>	NA	
2e	Quantity of overburden generation in m <sup>3</sup>	26500M <sup>3</sup> & 29818M <sup>3</sup>	6783M <sup>3</sup> NA	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	During inspection mine was not working & reported discontinued. Violation of provision of Rule 45(5),28 (1),31(4) & 26(2) pointed out for rectification.		

**2.0 Exploitation**

SN	Item	Proposals 2017-18 & 2018-19	Actual work	Remarks
3a	Number of pits proposed for production (Plate no 5A to 5E)	01 Pit, It was proposed to work in Pit No.2 & Pit No.3&4 as earmarked in plate No 6 for the year.	Worked partly as proposed for during the year 2017-18 & 2018-19 respectively.	Partly done as proposed due to less plant requirement.
3b	Quantity of ROM mineral production proposed	364375T (2017-18) 409998T (2018-19)	95550T (2017-18) 12550T (2018-19)	
3c	Recovery of saleable/usable mineral from ROM production	90% of ROM proposed	Entire ROM is utilising by proper sorting & sizing	Captive Consumption
3d	Quantity of mineral reject generation	10% of ROM proposed	NA	
3e	Grade of mineral reject generation and threshold value declared	Above THV & below cut-off grade bauxite	THV-Al <sub>2</sub> O <sub>3</sub> -30%(Min) & SiO <sub>2</sub> (total)-7%	
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 / mechanised	Manual / mechanised	

3i	Any analysis or beneficiation study proposed & carried out for sub-grade/ mineral reject	Not Proposed	Not done	-
3j	Provision of drilling & blasting in mineral benches	J/H drilling & blasting as and when requires	As proposed	-
3k	Provision of mining machineries in mineral benches	Excavator/JCB-02+1M3 bucket capacity, Tippers -06 (20T) & JCB-0, Rock breaker-01,J/H-03 etc.	Excavator/breaker-01 JCB-01 Tipper-02	
3l	Whether height of benches in OB & mineral suitable for method of mining proposed	mechanised working with regular bench height	Irregular bench height	
3m	Total area covered under excavation/pits	2.65Ha & 2.98Ha proposed in plan period	About 0.6949Ha & about 0.25Ha area exploited.	
3n	Ore to OB ratio for the pit/mine during the year	1:0.4	Nil	
3o	Total area put in use under different heads at the end of year (as on 31.03.2018)	2.65Ha & 2.98Ha proposed in plan period.Pit-14.8Ha, stack-1.75Ha,dump-0.8, green belt-0.812Ha	Pit-15.4949 ha, Stacks =2.45,TopSoil= NIL Waste=0.8 Ha, Infra./ Road = 2.1 Ha, Others-0.977 ha	
3p	Production of ROM mineral during last five-year period, as applicable	2014-15 2015-16 2016-17 2017-18 2018-19	274950T 273460T 270768T 364375T 409998T	0T 271565T 269430T 95550T 12550T
3q	General remarks of inspecting officer on method of mining etc.	During inspection mine was not working & reported discontinued. Violation of provision of Rule 45(5), 28 (1), 31(4) & 26(2) pointed out for rectification.		

### 3.0 Solid Waste Management-Dumping

SN	Item	Proposals 2017-18 & 2018-19	Actual work	Remarks
4a	Separate dumping of topsoil, OB/Mineral reject (Rule 32, 33)	Proposed for utilised for plantation purposes.	Topsoil is not reported /generated presently.	No OB/Waste proposed & generated. Entire ROM is utilising by proper blending as per quality requirement.
4b	Location of topsoil, OB & mineral reject dumps	Proposed for backfilled in mined out voids in SW	Partly done in backfilling/road work if	
4c	Number of dumps within lease area and outside lease area	None	None	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not applicable	Not applicable	
4e	Number of active & alive dumps	No proposal	Not applicable	
4f	Number of dead dumps	Nil	Nil	
4g	Number of dumps stabilised	Not applicable	NIL	
4h	Whether Retaining wall or garland drain all along dumps are there	-	One garland drain constructed (100M)	
4i	Length of Retaining wall or garland drain all along dump	Not applicable	One garland drain constructed (100M)	
4j	Number of settling ponds	Not proposed	NIL	
4k	Specific comments of inspecting officer	During inspection mine was not working & reported discontinued. Violation of provision of Rule 45(5),28 (1), 31(4) & 26(2) pointed out for rectification.		

### 4.0 Solid Waste Management-Backfilling

SN	Item	Proposals 2017-18 & 2018-19	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	2.65Ha & 2.98Ha proposed in plan period	0.246ha area backfilled	

5b	Area under backfilling of mined out area	--	-	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	7950M3 & 8945M3	Used for backfilled & plantation purposes.	
5d	Total area fully reclaimed & rehabilitated	Nil	About 3.95Ha partially	
5e	General remarks of inspecting officer on backfilling, reclamation etc.	During inspection mine was not working & reported discontinued. Violation of provision of Rule 45(5),28 (1), 31(4) & 26(2) pointed out for rectification		

### **6.0 Progressive Mine Closure Plan**

SN	Item	Proposals 2017-18 & 2018-19	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 23E (2). Details should be given in the format.	Proposed	Annual report on PMCP is not submitted.	
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	250No.& 0.15Ha	250No.& 0.15Ha	
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	(i) 2.65Ha (ii) 250 No (iii) 0.15Ha	(i) 0.246Ha (ii) 250 No (iii) 0.15Ha	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	---	Plantation is being done.	
6e	Compliance of Environmental monitoring (core zone/buffer zone)	Periodically monitoring as per IBM/MoEF guidelines.	Periodically monitoring as per IBM/MoEF guidelines.	
6f	General remarks of inspecting officer on PMCP compliance & progressive	During inspection mine was not working & reported discontinued. Violation of provision of Rule 45(5),28 (1), 31(4) & 26(2) pointed out for rectification		

### **7.0 Mineral Conservation**

SN	Item	Proposals 2017-18 & 2018-19	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	364375T (2017-18) 409998T (2018-19)	95550T (2017-18) 12550T (2018-19)	Lessee is utilizing entire ROM by proper sorting & sizing as per plant requirement.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Manual & Mechanised both	Manual & Mechanised both	
7c	Different grade of mineral sorted out at mines	Stacking for sorting & sizing	Stacking for sorting & sizing	
7d	Any beneficiation process at mines	Not required	NA	
7e	General remarks of inspecting officer on Mineral conservation &	Lessee is utilizing entire ROM by proper stacking, sorting & sizing as per plant requirement.		

	beneficiation issues	
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### 8.0 Environment

SN	Item	Proposals 2017-18 & 2018-19	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Proposed	Utilising for plantation over backfilled area	Whatever little top soil is generated, directly used for plantation purposes.
8b	Concurrent use or storage of topsoil	NA	NA	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	NA	NA	
8d	Use of OB, waste rock, rejects and fines dumps for restoring the land to its original use	NA	NA	
8e	Phased restoration, reclamation & rehabilitation of lands affected by mining operations (Pits, dumps etc.)	No proposal	Nil	
8f	Baseline information on (Rule 41) existence of plantation & additional plantation done	Proposal for plantation over backfilled area/pit	Plantation is carried out on backfilled area/pit as well as 7.5m area partly	Poor survival rate due to scarcity of water
8g	Survival rate	60%	About 50%	
8h	Water sprinkling on roads to control airborne dust	Water spraying on haul road loading & unloading points shall be provided	Regular water sprinkling is done.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	Entire OB & top soil is directly used for backfilling & further plantation purposes over the mineral exhausted pits.		

### 9.0 Compliance of Rule 45

S.N	Item	COMMENTS		Remarks
	Status of submission of Monthly and Annual returns	M.R. submitted up to –Jan. 2019 (2/02/19) A.R. submitted up to- 2017-18 (29/06/18)		
S.N	Item	Details GIVEN in A.R.	Observation of I/O	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist & Manager	Graduate Mining Engineer-01 Geologist – 1 & Manager -1	Shri Kirti Kumar Rathod, BE (Mining) WEF- <b>01/9/2017</b> , Santosh Kaluskar, MSc (Geology) WEF- <b>11/8/2017</b>	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under use – 15.49 Ha, Reclaimed area –3.494Ha Occupied by plant & bldg.-2.1Ha, Green belt/mineral storage-3.4Ha	**Scrutiny of annual return for the year 2017-18 has been carried out & deficiencies pointed out to lessee for rectification.	
9d	Scrutiny of Annual return on afforestation	No of trees planted: 250 with survival rate of 50%		
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	There is no mineral rejects during the year 2017-18		
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening stock, dispatch & closing stock of different grade of mineral is reported.		
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex.Mine price–580Rs. /T (Cement) Ex.Mine price- 355Rs. /T-(Ahrs.) Ex.Mine price- 355Rs./T-(Ref.)		
9i	Scrutiny of Annual return on fixed assets	--		
9k	Scrutiny of Annual return on mining machineries	01-Shovel(Hyd.)—1M3 & Haulage-25Ha-02 & water tanker		
<p><b>** Part-I, Sr No.12 land used details is not seems to be correct as per approved scheme of mining. Reconcile &amp; furnished correctly. Part-IIA, Capital structure, i.e. value to fixed assets, land, building, plant &amp; machinery, etc. are not mentioned proportionally of other leases. It needs correction. Part-III, Sr. No.1,</b></p>				

*electricity consumed in mine lease area shown as NIL, which is incorrect. Details of Tyres & Grease, Drill rods and other spares cost shown NIL, which is incorrect. Details of Royalty shown zero whereas ROM production & dispatch area reported in financial year. It needs correction. Depreciation of fixed assets & Overhead cost is not given correctly, reconcile & furnished with respect to weighted average of instant lease instead of similar cost in other leases. Part-V, Sr No.1, Type of Ore-Chemical specification of mineral rejects should be above threshold value & below cut off, It needs correction.. Sr No.4.2 (B),-Total quantity of OB/Waste removal & Mineral rejects shown as NIL which is incorrect. Part-V-Sec-5/6/8/9-HEMM capacity used in mine & proposed in approved mining plan are not same. It needs correction. Part-VI, Sr.No.2- Computation of Ex-mine price is not given correctly based upon invoice etc. Transportation cost from mine pit head to jetty should be mentioned separately in respective column. It needs correction. Part-VI, Sr No-4, It was reported that domestic sale of bauxite mineral of 404.86T was domestic transfer instead of domestic sale. Therefore it needs correction. Part-VII- Sr No. (v) Overhead cost mentioned 61.68Rs/T & Cost of royalty/ tonne mentioned as 120Rs./T which seems to be not correct. cost of production needs to reconcile & furnished proportionately. Production proposal for financially year 2017-18 is shown as zero, which is not correct*

**10- Details of violations observed during current inspection and compliance position of earlier violation pointed out:** - Presently no significant violation observed, except Rule 45(5) & 31(4) & 26(2) pointed out regarding discrepancies in annual return 2017-18 & monthly return of Jan, 19 for rectification. Presently mine was inspected for evaluation of online star rating templates.

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