

**MCDR INSPECTION REPORT****1.0 GENERAL**

<b>SN</b>	<b>Particulars</b>	<b>Details</b>
1 (a)	Name of the Mine	Pillidhar Bauxite Mine
1(b)	Name of Inspecting Officer	Sunil Kumar Sharma, Sr. ACOM
1(c)	Type of Inspection	MCDR, 2017, Star rating & Review of Mining plan
1(d)	Date of Inspection	17.12.2023
2.	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total ML area - 121.4054 ha. Forest land - 0.0 ha, Non Forest land – 121.4054 ha.
3	Mine-code	07GUJ07097
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/1077/2011
5	Name of the lessee, Address, phone, email and fax number	DALMIA REFRACTORIES LIMITED
6	Village	Virpur Lusari
7	Taluka/Mandal	Kalyanpur
8	District	DEVBHUMI DWARKA
9	Pin code	-
10	State	Gujarat
11	Post office	Mevasa
12	Nearest police station	Mevasa
13	Nearest Railway station	Khanbhaliya Railway Station
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	16/10/1999, 20 years up to 15.10.2019
18	Date of second Renewal, if applicable and its period & expiry	16/10/2019 to 31.03.2030
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	-
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	M/s Dalmia Refractories Limited, Dalmiapuram Post Office: Kallakudi, Kallakudi, District: Tiruchirappalli Tamil Nadu, 621651
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri Sanjay Kumar Kaushik Agent of Mines Dalmia Refractories Limited (Shri Nataraj Ceramic and Chemical Ind. Ltd.) Post Box No. 10 at & Po Khambhalia, Dist :DevbhumiDwarka, Gujarat 361 305. Phone : 09825208605, E-mail : k.sanjaykumar@dalmiaocl.com Date of appointment in mines 18.12.2018.
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri Sanjay Kumar Tiwari Mines Manager Dalmia Refractories Limited (Shri Nataraj Ceramic and Chemical Ind. Ltd.) Post Box No. 10 at & Po Khambhalia, Dist :DevbhumiDwarka, Gujarat 361 305. Phone : 09825126624, E-mail : Tiwari.sanjay1@dalmiaocl.com Date of appointment in mines 09.07.2013.
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri Sanjay Kumar Tiwari Mining Engineer (B.E. Mining) Total Experience :- 16 Years Dalmia Refractories Limited (Shri Nataraj Ceramic and Chemical Ind. Ltd.) Post Box No. 10 at & Po Khambhalia, Dist :DevbhumiDwarka, Gujarat 361 305. Phone : 09825126624,

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		E-mail : Tiwari.sanjay1@dalmiaocl.com Date of appointment in mines 09.07.2013
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Yes Shri Sanjay Kumar Kaushik, Geologist Shri Sanjay Kumar Tiwari, Mining Engineer
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Modification of Mining Plan: 684(4)(1)/MP-134/2018 –GNR Dated: 29.5.2018
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Review of Mining Plan: Approval Letter No. 684(4)(1)/MP-214/2019 –MDRD Period: 05 years Dated 09/04/2019 up to 31.03.2024.
27	Mineral(s) granted in lease and proved for mining	Bauxite
28	Method of Mining(Open cast, Underground)	Open cast working
29	Category (Fully Mechanised, Others or Manual)	Category- A, Fully Mechanised
30	Captive/Non Captive	Captive

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

#### Exploration

SN	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No Proposal	NA	-
1b	Exploration over lease area for Geological axis 1 or 2.	No Proposal	G1: 109.1954 ha G3: 12.21 ha	-
1c	Exploration Agency & Expenditure in lakh Rupees during the year	No Proposal	NA	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	No Proposal	12.21 ha.	12.21 ha area to be explored in G1 category as per Rule 12(4) of MCDR, 2017
1e	Balance reserves as on 31.03.2023 (in MT. Metric Tonne)	60,51,699 MT	111: 38,67,943 MT 121: 3,10,137 MT 221: 15,21,039 MT 333: 3,52,580 MT	-
1f	General remarks of inspecting officer on geology, exploration etc.	All lease area to be explored in G1 Category as per Rule 12(4) of MCDR, 2017. Proposal has been provided in Review of Mining Plan.		

#### 2.0 Development

SN	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	N280-N409,W1244-W1182,N628-N678,W300-W46,N222-N364,W67-W180,S05-S63,E41-W18,S100-S406,E468-E312	N628-N678,W300-W46 (B2) S100-S406,E468-E312 (E1)	-
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	OB : 03 ORE : 02	OB : 03 ORE : 02	
2c	Stripping ratio or ore to OB ratio	1:0.62	1:0.3.44	
2d	Quantity of topsoil generation in m <sup>3</sup>	1059	920	Used in plantation
2e	Quantity of overburden generation in m <sup>3</sup>	80,036 m <sup>3</sup>	20,561 m <sup>3</sup>	Less due to EC of 3,00,000 MT production was not

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			granted.
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Environment Clearance already taken by Lessee on 27th August 2007 Vide Govt. Clearance Order No: J-11015/168/2006 – IA. II (M) From Ministry of Environment & Forests, New Delhi for 80000 Mt. ROM per Annum. EC for 300000 Mt. is pending for further amendment.	

## 3.0 Exploitation

SN	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	Five pits	Two pits	
3b	Quantity of ROM mineral production proposed	3,00,800 MT	39,896 MT	Less due to EC
3c	Recovery of saleable/usable mineral from ROM production	100%	100%	-
3d	Quantity of mineral reject generation	No Proposal	NA	-
3e	Grade of mineral reject generation and threshold value declared	Threshold value= $Al_2O_3 \geq 30\%$ and $SiO_2 \leq 5\%$	NA	-
3f	Quantity of sub-grade mineral generation	2,55,680 MT	26,262.6 MT	-
3g	Grade of sub-grade mineral generation	$Al_2O_3$ : 42 % & Cement grade	$Al_2O_3$ : 42 % & Cement grade	-
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	No proposal	NA	
3j	Provision of drilling & blasting in mineral benches	Manual Drill (32mm Dia.)	Manual Drill (32mm Dia.)	
3k	Provision of mining machineries in mineral benches	Excavator-01 Tipper-04	Excavator-01 Tipper-04	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	
3m	Total area covered under excavation/pits	19.88 ha.	13.21 ha.	Less due to EC
3n	Ore to OB ratio for the pit/mine during the year	1:0.62	1:0.52	-
3o	Total area put in use under different heads at the end of year	Pit-19.8787 Ha. OB Dump: 0.3918Ha. Mineral storage/sub-grade stack: 3.610 Ha. Infrastructure & building, etc.) : 2.4802 Ha. Reclaim & Rehabilitated Area: 8.9647 Ha.	Pit-13.21 Ha. OB Dump:0.39 Ha. Area under stack yard: 9.3 Ha. Area under utility services: 2.48 Mine out area in the lease: 8 ha	
3p	Production of ROM mineral during last five-year period, as applicable	2018-19   300000 MT 2019-20   300000 MT 2020-21   300000 MT 2021-22   300000 MT 2022-23   300000 MT	2018-19   77730 MT 2019-20   75844 MT 2020-21   79835 MT 2021-22   79885 MT 2022-23   39896 MT	Less due EC
3q	General remarks of inspecting officer on method of mining etc.	Environment Clearance already taken by Lessee on 27th August 2007 Vide Govt. Clearance Order No: J-		

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	11015/168/ 2006– IA. II (M) From Ministry of Environment & Forests, New Delhi for 80000 Mt. ROM per Annum. EC for 300000 Mt. is pending for further amendment.
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**4.0 Solid Waste Management-Dumping**

SN	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	OB and Waste generated during the period will be back filled in proposed part of the mined out area	Top soil utilised for plantation and OB is utilised for backfilling	-
4b	Location of topsoil, OB & mineral reject dumps	S127-S417 E271- E432	S127-S417 E271- E432	-
4c	Number of dumps within lease area and outside lease area	01 dump within the lease area	01 dump within the lease area	-
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL	Outside UPL	-
4e	Number of active & alive dumps	01 dump	01 dump	
4f	Number of dead dumps	Nil	NA	
4g	Number of dumps stabilised	01	01	
4h	Whether Retaining wall or garland drain all along dumps are there	No Proposal	NA	
4i	Length of Retaining wall or garland drain all along dump	No Proposal	NA	
4j	Number of settling ponds	No Proposal	NA	
4k	Specific comments of inspecting officer	Nil		

**5.0 Solid Waste Management-Backfilling**

SN	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	8.3 Ha.	8 Ha	-
5b	Area under backfilling of mined out area	6.43 Ha	5.96 Ha	-
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Top soil to be utilised on backfilled area.	Top soil was utilised on backfilled area.	-
5d	Total area fully reclaimed & rehabilitated	8.9647 Ha	5.96 Ha	-
5e	General remarks of inspecting officer on backfilling, reclamation etc	Nil		

**6.0 Progressive Mine Closure Plan**

SN	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 23E (2). Details should be given in the format as given in Annexure-20.	Yes	Yes	-
6b	Management of worked/mined out benches i) Area available for rehabilitation (ha)	3.43 ha.	2.04 ha	
6c	Afforestation done (ha)	3.0 ha.	2.23 ha.	
6d	No. of saplings planted during the year	1000 no.	1500 no	
6e	Cumulative no. of plants	10000 no.	15929 no.	

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46f	Any other specific method of rehabilitation	No proposal	NA	
6g	Cost incurred on watch & care during the year	No proposal	Rs 52,900/-	
6h	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D)	-	2.04 ha	
6i	ii) Void filled by waste/tailings	1,28,058 MT	32,897 MT	Less due EC
6j	iii) Afforestation on the backfilled area	No proposal	NA	
6k	iv) Rehabilitation by making water reservoir	No proposal	NA	
6l	v) Any other specific means	No proposal	NA	
6m	Compliance of Rehabilitation of waste land within lease i) Afforestation	No proposal	NA	
6n	ii) Area rehabilitated (ha)	No proposal	NA	
6o	iii) Method of rehabilitation	No proposal	NA	
6p	Compliance of Environmental monitoring (core zone & buffer zone)	4 times in a year	Monitoring are carried out	Document checked.
6q	General remarks of inspecting officer on PMCP compliance & progressive	Found Satisfactory		

### 7.0 Mineral Conservation

SN	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Proposal made for sorting and sizing manually. Plant Grade: 45120 MT Non Plant Grade: 255680 MT ROM: 300000 MT	Sorting and sizing was done manually. P Grade: 13634 MT NP Grade: 26262 MT ROM: 39896 MT	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Manual	Manual	-
7c	Different grade of mineral sorted out at mines	Refractory & Non Refractory Grade	Refractory & Non Refractory Grade	-
7d	Any beneficiation process at mines	No proposal	NA	-
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	The sub-grade mineral is being sorted out manually and staked within the lease area on temporary basis.		

### 8.0 Environment

SN	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Separate removal and spreading of top soil on the backfilled area	Separate removal of top soil and utilised for plantation within lease area.	-
8b	Concurrent use or storage of topsoil	As above	Plantation	-
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No Proposal	1 old existing dump	-
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No Proposal	NA	-
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Part of the Mined out area to be backfilled and remaining part to be converted into water reservoir	Back filled area: 5.96 Ha. Area available for water Reservoir: 2.04 ha.	-
8f	Baseline information on existence of plantation & additional plantation done	Plantation will be done on backfilled land & in	Local species has been planted on the	-

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	(Rule 41)	statutory barrier. The species Neem, Gulmohar and other local species will be planted. person will be deputed for post plantation care	backfilled area and post plantation care is carried out on regular basis.	
8g	Survival rate	50%	98%	Cum 60%
8h	Water sprinkling on roads to control airborne dust	Water to be sprinkled on the haul road to suppress the dust being getting airborne.	Hired Basis Mobile water tankers is using & deploying on regular basis.	-
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	Environment Clearance already taken by Lessee on 27th August 2007 Vide Govt. Clearance Order No: J – 11015/168/2006 – IA. II (M) From Ministry of Environment & Forests, New Delhi for 80000 Mt. ROM per Annum. EC for 300000 Mt. is pending for further amendment.		

## 9.0 Compliance of Rule 45

S. N.	Item	COMMENTS		Remarks
9a.	Status of submission of Monthly and Annual returns	M.R. Submitted up to – Nov - 2023 A.R. submitted up to- year 2022 - 2023		-
S. N.	Item	Details GIVEN in A.R.	Observation of I/Officer	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	-	Found in order	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	-	Found in order	
9d	Scrutiny of Annual return on afforestation	-	Found in order	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	-	Found in order	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	-	Found in order	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	-	Found in order	
9i	Scrutiny of Annual return on fixed assets	-	Found in order	
9k	Scrutiny of Annual return on mining machineries	-	Found in order	

**10- Details of violations observed during current inspection and compliance position of earlier violation pointed out: -**

Presently mine was inspected for Review of mining plan, MCDR and Star Rating. Presently no significant violation observed & pointed out

Sunil Kumar Sharma  
(Senior Assistant Controller of mines)  
Indian Bureau of Mine, Gandhinagar

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