

## MCDR INSPECTION REPORT

### 1.0 GENERAL

SN	Particulars	Details
1	Name of the Mine	Pillidhar Bauxite Mine
2A	Inspecting officer with date	G.Ram, Sr.ACOM, 17/7/2021-Star Rating /MCDR
2B	Accompanying official	Sh. Sanjay Tiwari, Mines Manager
3	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total area-121-405 Ha, Non-Forest land
4	Mine code & IBM Registration Number under rule 45 of MCDR, 17	07GUJ107097 & IBM/1077/2011
5	Name of the lessee, Address, phone, email and fax number	M/s Natraj Ceramic & Chemical Industries Limited (M/s Dalmia Refractories Ltd.) Regd. Office-Dalmiapuram,PO-Kallakudi-621651, Distt-Tiruchirapalli,Tamilnadu,Work office-PB No-10,Jamkhambhalia District-Devbhumi Dwarka,Gujarat PIN-361305
6	Village	Virpur
7	Taluka/Mandal	Kalyanpur
8	District	Devbhumi Dwarka
9	Pin code	361350
10	State	Gujarat
11	Post office	Kalyanpur
12	Nearest police station	Kalyanpur
13	Nearest Railway station	Khambhalia
14	Date of Grant of Mining Lease	07-07-1979
15	Date of Execution	16-10-1979, Expiry-10.10.2029 as per MMDR Amendment Act,2015
16	Date of opening of Mine	NA
17	Date of first Renewal, if applicable and its period & expiry	05.10.1998, Form-D-03.11.1998
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. Sameer Nagpal, (Managing Director), WEF- <b>11/3/2016</b> , M/s Natraj Ceramic & Chemical Industries Limited (M/s Dalmia Refractories Ltd.) Regd. Office-Dalmiapuram,PO-Kallakudi-621651, Distt-Tiruchirapalli, Tamilnadu-011-123465308
21	Name of the Mine Agent, Address, phone, email, fax & date of appointment	Shri Sanjay Kumar Kaushik, (MSc. Geology) WEF- <b>18-12-2018</b> , Mobile-9825208605, <a href="mailto:sanjaykk64.2011@gmail.com">sanjaykk64.2011@gmail.com</a> , Work office-PB No-10,Jamkhambhalia District-Devbhumi Dwarka,Gujarat PIN-361305
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Mr. Sanjay Kumar Tiwari, BE (Mining) WEF- <b>09/7/2013</b> , Mobile-9825126624, PB No-10,Jamkhambhalia District-Devbhumi Dwarka,Gujarat PIN-361305,Tiwari.sanjay1@dalmiaocl.com
23	Name of the ME, Qua. & Exp., Address, phone , email, fax, date of appointment	Shri Sanjay Kumar Tiwari- BE Mining , <b>09-7-2013</b> Shri Sanjay Kumar Kaushik: MSc Geology & > 10 year experience. <b>05.3.1992</b> onwards to till date.
24	Whether Geologist & ME appointed in mines satisfy the rule 42, 43 & 44	Yes- As above
25	Date of Approval of Mining Plan /Modified Mining Plan with five-year period and specific condition in approval letter, if any.	682(23)MS-499/2009 (MCCM) (N) UDP Dated-08/7/2014 for the period of 01.4.2014 to 31.3.2019
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-499/2009 (MCCM) (N) UDP Dated-08/7/2014 for the period of 01.4.2014 to 31.3.2019 & Mod in MP-684(4)(1)/MP-134/2018 for 2018-19 dated 29/5/2018, 684(4)(1)/MP-214/2019 dated 09/4/2019 for 2019-20 to 2023-24.
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 2020-21	Actual work	Remarks
1a	Backlog of previous year	Not Proposed	NIL	Entire potential area is explored in either G1/G2 level of exploration till 2016-17
1b	Exploration over lease area for Geological axis 1 or 2.	121.40Ha	G1/G2-92.83 Ha & G-3/G4-28.57 Ha	
1c	Exploration Agency & Exp. in lakh Rupees during the year	Not Proposed	Stratum Geo Services Pvt Ltd, Makarpura GIDC, Vadodara, Gujarat as well as others agency.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Not Proposed	NIL	NIL
1e	Balance reserves as on 01.04.2021 (111, 121 & 122)	(111, 121 & 122)- 3.987 Million tonne (221&222)-1.52 & 0.35 Million tonne		Plant & Non-plant grade
1f	General remarks of inspecting officer	Entire lease area is explored in G1/G2 level of exploration, Further no exploration work is proposed in present plan period.		

**1.0 Development**

SN	Item	Proposals 2020-21	Actual work	Remarks
2a	Location of development w.r.t. lease area	It was proposed to work in Pit No A1,B1,C1,D1,E1 as earmarked in plate No 5	Partly done as proposed, lagging in production achievement lateral & depth also.	Lagging in production due to Expanded EC capacity & under process.
2b	Separate benches in topsoil, overburden and mineral	Proposed	Maintained separately benches.	
2c	Stripping ratio/ ore to OB ratio	1:0.5	1:0.2	
2d	Quantity of topsoil in m3	1058M3	--	
2e	Quantity of overburden generation in m3	79753M3	14195T	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Mine workings deviated due to lagging in production due to expanded EC capacity / quality constraints/Plant requirement.		

**2.0 Exploitation**

SN	Item	Proposals 2020-21	Actual work	Remarks
3a	Number of pits proposed for production (Plate no 5A to 5E)	05 Pits, It was proposed to work in Pit No A2,B2 ,D2 , F1,E1 as earmarked in plate No 5	04 Pits partly due to lagging.	Partly done as proposed due to lagging/Enhanced EC capacity.
3b	Quantity of ROM mineral production proposed	Total-300475T {45116T(PG) & 255656T(NPG)}	Total-79834.81T {6091.36T(PG) 73743.45T(NPG)}	
3c	Recovery of saleable/usable mineral from ROM production	45116T (PG)	6091.36T (PG)	Captive Consumption
3d	Quantity of mineral reject generation	255656T (NPG)	73743.45T (NPG)}	
3e	Grade of mineral reject generation and threshold value declared	Above THV & below cut-off grade bauxite	THV-AI2O3-30%(Min) & SiO2(total)-7%	
3f	Quantity of sub-grade mineral generation	NA	NA	
3g	Grade of sub-grade mineral generation	NA	NA	
3h	Manual / Mechanised method adopted for segregating	Manual as well as mechanised both	Manual as well as mechanised both	
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	Manual drilling & blasting	Manual drilling & blasting	-

3k	Provision of mining machineries in mineral benches	Excavator/JCB-01-1M3 bucket capacity, Dumpers -02 (25T) & tractor trolley-08 Compressor-350cfm-01 Water Sprinklers	As per proposed		
3l	Whether height of benches in OB & mineral suitable for method of mining proposed	Manual & mechanised working with regular bench height	Irregular bench height due to manual & mech. working		
3m	Total area covered under excavation/pits	Pit-11.31 in plan period (Avg.-2.26Ha/yr)	Total excavated area is about Pit -15.73 Ha		
3n	Ore to OB ratio for the pit/mine during the year	1:0.5	Nil		
3o	Total area put in use under different heads at the end of year (as on 31.03.2021)	Pit – 8.0 in plan period,	Total area Pit -15.73 Ha, OB- 0.39Ha, stack-2.25Ha,Infra-2.48Ha, Green belt-7Ha		
3p	Production of ROM mineral during last five-year period, as applicable	2017-18 2018-19 2019-20 2020-21 2021-22	300076 300076 300772 300772 300773	79955.4T 42062.4T 75843.72T 79834.81T 9697.8T	EC for expansion of production from 80000T to 3.0Lakh tonne/annum is under process. (up to june,21)
3q	General remarks of inspecting officer on method of mining etc.	Production lagging due to expanded EC capacity/ plant requirement / quality etc. & under process.			

### 3.0 Solid Waste Management-Dumping

SN	Item	Proposals 2020-21	Actual work	Remarks
4a	Separate dumping of topsoil, OB/Mineral reject	No proposal	Not applicable	Not applicable
4b	Location of topsoil, OB & mineral reject dumps	No proposal	Not applicable	
4c	Number of dumps within lease area and outside lease area	None	None	
4d	Location of dumps w.r.t. ultimate pit limit	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	-	
4h	Whether Retaining wall or garland drain all along dumps are there	Not applicable	-	
4i	Length of Retaining wall or garland drain all along dump	Not applicable	-	
4j	Number of settling ponds	Rain water storage in mined pits	Rain water stored in mined pits	
4k	Specific comments of inspecting officer	No OB/Waste proposed & generated. Entire ROM is utilising by proper blending as per quality requirement.		

### 4.0 Solid Waste Management-Backfilling

SN	Item	Proposals 2020-21	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Proposed-0.8186Ha	0.818ha, About 7Ha area backfilled in lease area.	
5b	Area under backfilling of mined out area	--	-	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	1058M3	Used for backfilled areas.	

5d	Total area fully reclaimed & rehabilitated	Nil	About 7Ha	
5e	General remarks of inspecting officer on backfilling, reclamation etc.	OB /Waste is utilising for backfilling the mineral exhausted pits. ROM is utilising by proper grading (PG/NPG) as per quality requirement.		

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

SN	Item	Proposals 2020-21	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly	Proposed	Annual report on PMCP is not submitted cumulative	V/L under provision of Rule 26(2) pointed out.
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	500No.& 0.35Ha Fencing-324M	1550No &0.50Ha Fencing-300M	
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	No proposal	Not applicable	Rain water is stored in mined out pits area for water sprinkling.
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	Annual report on PMCP submitted on 23/05/2018, Scarcity of water is big problem in this area. Survival is poor.		

### **7.0 Mineral Conservation**

SN	Item	Proposals 2020-21	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Total-300475T {45116T(PG) & 255656T(NPG)}	Total-79834.81T {6091.36T(PG) 73743.45T(NPG)}	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 & beneficiation issues	Lessee is utilizing entire ROM by proper stacking, sorting & sizing as per plant requirement.		

### **8.0 Environment**

SN	Item	Proposals 2020-21	Actual work	Remarks
8a	Separate removal and utilization of topsoil	Proposed	Utilising for plantation over backfilled area	Whatever little top soil is generated, directly used for plantation
8b	Concurrent use or storage of topsoil	NA	NA	
8c	Separate dumps for overburden, waste rock, rejects and fines	NA	NA	

8d	Use of OB, waste rock, rejects and fines dumps for restoring the land to its original use	NA	NA	purposes.
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	
8g	Survival rate	65%	About 90%	
8h	Water sprinkling on roads to control airborne dust	Water spraying on haul road	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 –June. 2021 (12/07/21) A.R. submitted up to- 2020-21 (15/06/21)		
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	Shri Sanjay Kumar Tiwari-BE (Mining)- <b>09-7-2013</b> , Sanjay Kumar Kaushik: MSc Geology & > 10 year experience. <b>05-3-92</b>		
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under use – 15.73Ha, Rec. area –7Ha, Occupied by plant & bldg.-2.48Ha, Waste dump-2.25	**Scrutiny of annual return for the year 2020-21 has been carried out & deficiencies pointed out to lessee for rectification.	VL pointed out under rule 45(7)
9d	Scrutiny of Annual return on afforestation	No of trees planted: 1500 with survival rate of 99%		
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	There is no mineral rejects reported but generated NPG		
9f	Scrutiny of Annual return on ROM stock and/or graded ore	O/s-357493.5T-P-73743.45T C/s-408999.4T(NGP),O/s-700,P-22237.5T,Dispatch-0T C/s-22937.5		
9g	Scrutiny of Annual return on sale value, Ex.Mine price production cost	Ex.Mine price – 430Rs. /T (PG) Ex.Mine price- 545Rs./T-(NPG)		
9i	Scrutiny of Annual return on fixed assets	--		
9k	Scrutiny of Annual return on mining machineries	Other HEMM-35HP-01Unit & Haulage-35Ha-08 units		

**10- Details of violations observed during current inspection and compliance position of earlier violation pointed out:** - Presently no significant violation observed, except Rule 26(2),45(5)(7) pointed out regarding discrepancies in annual return 2020-21 & cumulative PMCP details. Star rating validation (03) done.