

INSPECTION REPORT

1.0 GENERAL

SN	Particulars	Details
1(a)	Name of the Mine	Mahadevia & Gandhvi Bauxite Mine
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	Star Ratings/MCDR
1(e)	Date of Inspection	31.10.2017
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total Lease area- 168.3124 ha.(Non forest land)
3	Mine Code	07GUJ07024
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/269/2011
5	Name of the lessee, Address, phone, email and fax number	M/s. Nirmalaben S Mehta M/s. Nirmalaben S Mehta Jamnagar Dwarka Highway,P.O-. Khambhalia,Tahsil/Taluka- Jam-Khambhalia, Distt-Devbhumi Dwarka, State-Gujarat Pincode-361305,Fax No-02833-234053 Phone No-02833-236893/94 Email-nirmalabensmehta@yahoo.com
6	Village	Mahadevia & Gandhvi
7	Taluka/Mandal	Kalyanpur
8	District	Devbhumi Dwarka
9	Pincode	361315
10	State	Gujarat
11	Post office	Bhatia
12	Nearest police station	Bhatia
13	Nearest Railway station	Bhatia
14	Date of Grant of Mining Lease	4/10/1963
15	Date of Execution	09/10/1963 (20 Years)
16	Date of opening of Mine	09/10/1963
17	Date of first Renewal, if applicable and its period & expiry	Date of first Renewal Application- 01/10/1882 Period- 10 Years Expiry Date-08/10/1993
18	Date of second Renewal, if applicable and its period & expiry	Date of Second Renewal Application-28/09/1992 Period- 20 Years Expiry Date-08/10/2013
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	Date of Third Renewal Application-15/06/2012 Period- 20 Years Lease has deemed to be renewal up to 31/03/2020 under MMDR Act 2015
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Name of the Nominated Owner- M/s. Nirmalaben S Mehta Address- M/s. Nirmalaben S Mehta Jamnagar Dwarka Highway, P.O-. Khambhalia, Tahsil/Taluka-Jam-Khambhalia, Distt-Devbhumi Dwarka(Earlier Jamnagar),State-Gujarat Pincode-361305,Fax No-02833-234053 Phone No-02833-236893/94
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Name of the Mine Agent- S K Upadhyay Address- M/s. Nirmalaben S Mehta Jamnagar Dwarka Highway, P.O-. Khambhalia, Tahsil/Taluka-Jam-Khambhalia, Distt-Devbhumi Dwarka(Earlier Jamnagar),State-Gujarat Pincode-361305,Fax No-02833-234053 Phone No-02833-236893/94 Email-nirmalabensmehta@yahoo.com
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Name of the Mine Manager- S K Upadhyay Address- M/s. Nirmalaben S Mehta Jamnagar Dwarka Highway, P.O-. Khambhalia, Tahsil/Taluka-Jam-Khambhalia, Distt-Devbhumi Dwarka(Earlier Jamnagar),State-Gujarat

		Pincode-361305, Fax No-02833-234053 Phone No-02833-236893/94 Email-nirmalabensmehta@yahoo.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. Sushil Kumar Upadhyay Qualification -B.E(Mining) Total experience -15 Years Address - M/s. Nirmalaben S Mehta Jamnagar Dwarka Highway, P.O-. Khambhalia, Tahsil/Taluka-Jam-Khambhalia, Distt-Devbhumi Dwarka(Earlier Jamnagar),State-Gujarat Pincode-361305, Fax No-02833-234053 Phone No-02833-236893/94 Email-nirmalabensmehta@yahoo.com Date of Appointment -15/06/2016
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57.	Mr. Sushil Kumar Upadhyay appointed as Mining Engineer and Mr Vivek Shah as a Geologist to satisfy the rule 55 & carrying out their duties as per rule 56 & 57.
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Mining Plan was approved vide letter No-682 (23) (MS-633) / 2011 MCCM (N) UDP Dated 03/06/2016 for the period-2016-17 to 2019-20
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- 05/08/2011 Five-year period-2011-12 to 2013-14
27	Mineral(s) granted in lease and proved for mining	Bauxite
28	Method of Mining(Opencast, Underground)	Opencast
29	Category (Fully Mechanised, Others or Manual)	Category A Fully Mechanised
30	Captive/Non Captive	Non 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	Not Proposed	Nil	No any pit was proposed in previous year
1b	Exploration over lease area for Geological axis 1 or 2.	Not Proposed	Nil	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Not Proposed	Nil	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Maximum area has been worked out by different pits and prospecting s pits also made over remaining area in past.		
1e	Balance reserves as on 01.04.2017	Total Mineral reserve 1.Proved Mineral Reserve(111) =7044544 MT 2.Probable Mineral reserve(122) =10,88,441 MT Total-8132985 MT	Total Mineral reserve 1.Proved Mineral Reserve(111) =6584600 MT 2.Probable Mineral reserve(122) =10,88,441 MT Total-673041MT As on 1/01/2017	
1f	General remarks of inspecting officer on geology, exploration etc.	It was advised to carry out exploration by prospecting pits in grid wise pattern in future.		

2.0 Development

SN	Item	Proposals (2016-17)	Actual work (2016-17)	Remarks
2a	Location of development w.r.t. lease area	In Mahadeviya block & Gandhivi the strip of Mahadevia block	Mining operation & ROM excavation carried as per the proposed locations with	

		located in south-east part of block & in Gandhvi Block south-Western part of block working were proposed.	some deviation.	
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Separates benches in Topsoil= NIL OB= NIL Bauxite = 4.5 (Mahadeviya block) & 2.5 in Gandhvi block	Working done as proposed	
2c	Stripping ratio or ore to OB ratio	NIL	NIL	
2d	Quantity of topsoil generation in m3	NIL	NIL	
2e	Quantity of overburden generation in m3	NIL	NIL	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Working pits were not developed in systematic manner to achieve the desired grade and this was advised accordingly.		

3.0 Exploitation

SN	Item	Proposals (2016-17)	Actual work (2016-17)	Remarks
3a	Number of pits proposed for production	NIL	NIL	
3b	Quantity of ROM mineral production proposed	620650 MT	459944 MT	
3c	Recovery of salable/usable mineral from ROM production	95%	100%	
3d	Quantity of mineral reject generation	5%	NIL	
3e	Grade of mineral reject generation and threshold value declared	Not Proposed	NIL	
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	NIL	
3j	Provision of drilling & blasting in mineral benches	Drilling and blasting proposed for 30% of ROM bauxite production only.	2016-17 =Quantity of explosive consumed during year are(Small dia. Up to 32 mm) 1). Slurry explosive - 29.75 Kg. 2.Detonators(Ordinary)- 16 nos 3.Safety fuse-24 Mts 4. Detonating Fuse = 675 Mtr.	Consumption for drilling & blasting carried out in the year
3k	Provision of mining machineries in mineral benches	Excavator (2M ³)-2 nos Tipper(25MT)- 4nos Wagon drill Machine(100 mm)-1 nos Compressor(365cft/m)- 1 nos Water tanker-1nos	Excavator and tipper combination are being used.	
3l	Whether height of benches in overburden and mineral suitable	Forming one bench of 4.5m in Mahadevia	4 to 5 mts height in Mahadevia & 2 to 3 in	

	for method of mining proposed in MP/SOM	block and 2.5 m in Gandhvi block was proposed. Width proposed to kept as 10m.	Gandhavi block.	
3m	Total area covered under excavation/pits	In 2016-17 proposed area 52110m ² in Mahadevia block & 19050 m ² in Gandhvi block	62103 m ² area excavated during the year 2016-17 in both blocks Mahadevia & Gandhvi block.	
3n	Ore to OB ratio for the pit/mine during the year	Not Proposed	NIL	
3o	Total area put in use under different heads at the end of year	Pit- 27.65 Waste/reject NIL Others- NIL	Pit- 29.7973Ha OB Waste-0.5Ha Plant building-0.98Ha Other-0.578Ha	
3p	Production of ROM mineral during last five-year period, as applicable	Yr-515768 MT Yr-585674 MT Yr-NIL Yr-4, 59,974 MT Yr-620650 MT	2012-13=3,12,741 MT 2013-14=4,77,979 MT 2014-15=NIL 2015-16=4,59,974 MT 2016-17=4,59,944 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)	Not Proposed	Generation of topsoil, OB and Mineral reject is Nil	
4b	Location of topsoil, OB & mineral reject dumps	Not Proposed	Nil	
4c	Number of dumps within lease area and outside lease area	Not Proposed	Nil	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not Proposed	Nil	
4e	Number of active & alive dumps	Nil	Nil	
4f	Number of dead dumps	Nil	Nil	
4g	Number of dumps stabilised	Nil	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there	Nil	Nil	
4i	Length of Retaining wall or garland drain all along dump	Nil	Nil	
4j	Number of settling ponds	Nil	Nil	
4k	Specific comments of inspecting officer	No top soil & OB encountered hence the maximum information is mentioned as 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	Backfilling by waste material proposed where bauxite mineral ore exhausted.	Nil	Due to less despatch
5b	Area under backfilling of mined out area	4626M ²	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Not Proposed	Nil	

5d	Total area fully reclaimed & rehabilitated	Not Proposed	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). Details should be given in the format as given in Annexure-20.		Annual report on PMCP work submitted in time as required as prescribed rule	
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	Proposed in the year 2016-17 i) Nil ii) Nil iii) 4626 M ² iv) 66534 M ² v) Nil	Actual in the year 2016-17 i) Nil ii) Nil iii) 1050M ² iv) Nil v) Nil	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	Not Proposed	Nil	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Ambient air quality -One Water Quality - One Noise Level survey - One	Ambient Air Quality Monitoring done Quarterly once in year (Except Monsoon Season) Water analysis done quarterly once in a year	
6f	General remarks of inspecting officer on PMCP compliance & progressive	Environmental monitoring works have been entrusted to the outside Consultant and monitoring reports were produced during the 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	620650 MT Grade-wise sorting within lease area proposed	459944 MT despatch as Cement grade. Grade-wise sorting within lease area done	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Manual	Manual	
7c	Different grade of mineral sorted out at mines	Sorting of ROM (Bauxite) within the quarry proposed for different grade, such as	Hand sorting within the quarry for different grade, such as abrasive grade,	

		abrasive grade, Ceramic grade and cement grade (Low grade).	Ceramic grade and cement grade (Low grade) carried out	
7d	Any beneficiation process at mines	Not Proposed	The ROM bauxite as mined is a mixture of ore and other waste material such as lateritic clay and laterite with very low in Al_2O_3 and high in Fe_2O_3 and SiO_2 . Usually this bauxite is hand sorted within the quarry for different grade, such as abrasive grade, Ceramic grade and cement grade (Low grade). The hand sorted mineral is transported from the mines where as the waste is backfilled into the quarry.	
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_2O_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)	No top soil generation proposed	Not Applicable									
8b	Concurrent use or storage of topsoil	No top soil generation proposed	During the Mining Plan period No soil/OB is Generated									
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	In the proposed Mining Plan No soil/OB will be Generated, Waste that is likely to be generated will be in the form of mineral waste, which is below the threshold grade, which has no sale value. Year wise waste generation is <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Year</th> <th>Volume of waste (M^3)</th> </tr> </thead> <tbody> <tr> <td>2016-17</td> <td>14106</td> </tr> </tbody> </table>	Year	Volume of waste (M^3)	2016-17	14106	Due to less production there was no generation of mineral waste. <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Year</th> <th>Volume of waste (M^3)</th> </tr> </thead> <tbody> <tr> <td>2016-17</td> <td>NIL</td> </tr> </tbody> </table>	Year	Volume of waste (M^3)	2016-17	NIL	
Year	Volume of waste (M^3)											
2016-17	14106											
Year	Volume of waste (M^3)											
2016-17	NIL											
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No soil/OB proposed to be Generated. The waste generated proposed to be backfilled in mine out land	No soil/OB is Generated. The waste generated during the year 2016-17 period is to backfilled in mine out land									
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Degradation of land proposed to be backfilled. Total area proposed to be backfilled -4626 M2	Not done									
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	Not Proposed	Good asthetic beauty near mine office									
8g	Survival rate	Not Proposed	About 50-60%									
8h	Water sprinkling on roads to control airborne dust	Yes	Yes									

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.
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9.0 Compliance of Rule 45

S.N	Item	COMMENTS	Remarks
.	Status of submission of Monthly and Annual returns	M.R. Submitted for the preceding month A.R. for the year 2016-17 submitted 15.06.2017	

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	Sh.S.K.Uppadhyay, appointed as ME Sh. Vevek Shah appointed as Geologist	Both Mining Engineer & Geologist were present during the inspection	Mine representatives were advised to submit the AR online meticulously and should furnish correct costing, Ex-mine price, etc. as per IBM guidelines in future.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pit- 32.820Ha OB Waste-0.98Ha Plant building-0.98Ha	Pit- 29.7973Ha OB Waste-0.5Ha Plant building-0.98Ha Other-0.578Ha	
9d	Scrutiny of Annual return on afforestation	210 Saplings with Survival Rate of 75%	210 Saplings with Survival Rate of 75%	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Not Give	Nil	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Details ff ROM stock and/or graded ore given in Annual Return 2016-17	Quantity of individual ROM stocks with its grade not given correctly in AR. Advice on the same to Mines Repre.	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex-mine price- Rs-390/MT Cost of Production Rs-309/MT	Ex-mine price- Rs-390/MT Cost of Production Rs-309/MT	
9i	Scrutiny of Annual return on fixed assets	Fixed assets is given as Rs. 696275000	Fixed assets is given as Rs. 696275000	
9k	Scrutiny of Annual return on mining machineries	Excavator (2M ³)-2 nos Tipper(25MT)- 4nos Wagon drill Machine(100 mm)-1nos Compressor(365cft/m)-1 nos, Water tanker-1nos	Nil	

10- Details of violations observed during current inspection and compliance position of earlier violation pointed out:- Last inspection was carried out on dtd 27.04.16 & violation of rules 12(3), 13(1), 23(E)(2) & 45(5)(b) were pointed out and violation letter was issued on 26.05.16 but as per the available compliance position is not cleared. During this inspection as such no violations were pointed out.

Note: This mining lease is expiring on 31st March,2020 so as per the amended by MCDR, 2018 vide G.S.R. 289(E) dtd 27.03.2018, violation & show-cause issued to the lessee for submission of Modified MP & FMCP for necessary compliances.
