

## MCDR INSPECTION REPORT

### 1.0 GENERAL

SN	Particulars	Details
1 (a)	Name of the Mine	Mahadevia & Gandhvi Bauxite Mine
1(b)	Name of Inspecting Officer	Sanjay M. Girhe
1(c)	Designation of Inspecting Officer	Sr. Mining Geologist
1(d)	Date of Inspection	25.10.2018
1(e)	Type of Inspection	Review of Mining Plan/Start Ratings/MCDR,
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total Lease area- 168.3124 ha.(Non forest land)
3	Minocode	07GUJ07006
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/269/2011
5	Name of the lessee, Address, phone, email and fax number	<b>M/s. Nirmalaben S Mehta</b> 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	<b>Name of the Nominated Owner-</b> Shri Hareshbhai Surendra Bhai Mehta <b>Address-</b> 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	<b>Name of the Mine Agent-</b> Javed Sheikh <b>Address-</b> 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

		<a href="mailto:Email-nirmalabensmehta@yahoo.com">Email-nirmalabensmehta@yahoo.com</a>
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	<b>Name of the Mine Manager</b> -Joshi Jitesh Maganlal <b>Address</b> - 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 <a href="mailto:Email-nirmalabensmehta@yahoo.com">Email-nirmalabensmehta@yahoo.com</a>
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	<b>Name of the Mining Engineer</b> - Joshi Jitesh Maganlal <b>Address</b> - 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 <a href="mailto:Email-nirmalabensmehta@yahoo.com">Email-nirmalabensmehta@yahoo.com</a>
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57.	We have Appointed to Mr. Joshi Jitesh Maganlal as Mining Engineer and Mr N P Shukla 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.	Date of Approval of Mining Plan- 03/06/2016 Mining Plan period-206-17 to 2019-20 Specific condition in approval letter, if any- Annexure No 1(Mining Plan Approval Letter)
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 Specific condition in approval letter, if any- Annexure No 1(Scheme of Mining Approval Letter)
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 (2017-18)	Actual work (2017-18)	Remarks
1a	Backlog of previous year	5 Trial pit	5 Trial pit	No any Trial pit was proposed in previous year
1b	Exploration over lease area for Geological axis 1 or 2.	125.2424 ha.	125.2424 ha.	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	Lessee itself explored the area	Lessee itself explore the area	5 trial pits was proposed during the year 2017-18.
1d	Balance area to be explored to bring Geological axis in 1 or 2	43.07 Ha.	43.07 Ha.	43.07 Ha area required for detailed exploration
1e	Balance reserves as on 01.04.2018	(As on 01.04.2017) Total Mineral reserve	(As on 01.04.2018) Total Mineral reserve 1.Proved Mineral	

		1.Proved Mineral Reserve(111) =7044544 MT 2.Probable Mineral reserve(122) =10,88,441 MT Total-8132985 MT	Reserve(111) =6288636 MT 2.Probable Mineral reserve(122) =1088441 MT Total-7377077MT As on 01/04/2018	
1f	General remarks of inspecting officer on geology, exploration, etc.	Exploration carried out by trial pits not found on regular grid pattern and accordingly advice to the lessee		

## **2.0 Development**

SN	Item	Proposals (2017-18)	Actual work (2017-18)	Remarks
2a	Location of development w.r.t. lease area	Mahadeviya & Gandhvi Block	Mahadeviya Block	Proposed Production 631150 MT against Achieved production 295964 MT
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Top Soil- Nil OB- Nil Bauxite-4.5mts Mahadevia Block & 2.3 to 3.0M in Gandhvi block	Benching pattern maintained as proposed with minor deviations.	There is no any proposal of Top soil and OB
2c	Stripping ratio or ore to OB ratio	1:0:0	1:0:0	
2d	Quantity of topsoil generation in m3	No proposals	Nil	
2e	Quantity of overburden generation in m3	No proposals	Nil	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Numbers of pits have been opened to get targeted production & un systematic approach seen in developing mine.		

## **3.0 Exploitation**

SN	Item	Proposals (2017-18)	Actual work (2017-18)	Remarks
3a	Number of pits proposed for production	In different pits of Mahadevia & Gandhvi blocks	Production achieved from Mahadevia & Gandhvi blocks in different pits with minor deviation.	
3b	Quantity of ROM mineral production proposed	631150 MT	295964 MT	Less production due to lack of demand in oversea market.
3c	Recovery of salable/usable mineral from ROM production	95%	100% (With proper Blending)	Manual sorting is being practised.
3d	Quantity of mineral reject generation	No Proposals	Nil	
3e	Grade of mineral reject generation and threshold value declared	No proposals	Nil	No Mineral rejects is generated
3f	Quantity of sub-grade mineral generation	No proposals	Nil	

3g	Grade of sub-grade mineral generation	No proposals	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	No Proposals	NA	
3j	Provision of drilling & blasting in mineral benches	Drilling and blasting proposed for 30% of ROM bauxite production only.	<b>2017-18</b> =Quantity of explosive consumed during year are(Small dia. Up to 32 mm) 1. Slurry explosive -49 Kg. 2.Detonators(Ordinary)-38 nos 3.Safety fuse-57 Mts 4. Detonating Fuse = 825 Mtr. ANFO-1200 Kg	
3k	Provision of mining machineries in mineral benches	Excavator (2M <sup>3</sup> )-2 nos Tipper (25MT)-4nos Wagon drill Machine(100 mm)-1nos Compressor(365cft/m)-1 nos Water tanker-1nos	Excavator (1M <sup>3</sup> )-2 nos Tipper (25MT)- 4nos Wagon drill Machine(100 mm)-1nos Compressor(365cft/m)-1 nos Water tanker-1nos	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bauxite bench of 4.5m in Mahadevia block and 2.5 m in Gandhvi block proposed.	Bauxite is mined out by forming one bench 4.5m in Mahadeviya block.	
3m	Total area covered under excavation/pits	In 2017-18 proposed area 4.5085 ha. in Mahadeviya block & 3.36Ha in Gandhvi block	2.9895 ha. Area excavated during the year 2017-18 in both Mahadeviya & Gandhvi block.	
3n	Ore to OB ratio for the pit/mine during the year	1: 00	1: 00	
3o	Total area put in use under different heads at the end of year	Pit- 35.63 ha including Mineral Storage-3.2080	Pit- 30.53 ha. including Mineral Storage-3.2080	
3p	Production of ROM mineral during last Plan period, as applicable	2016-17-620650 MT 2017-18-631150 MT	2016-17-4,59,944 MT 2017-18-2,95,964 MT	
3q	General remarks of inspecting officer on method of mining etc.	Nil		

#### **4.0 Solid Waste Management-Dumping**

SN	Item	Proposals (2017-18)	Actual work (2017-18)	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Not Proposed	Nil	No OB/soil generated during the year 2017-18

4b	Location of topsoil, OB & mineral reject dumps	Not Proposed	Nil	No OB/Top soil generated
4c	Number of dumps within lease area and outside lease area	Not Proposed	Nil	No external dumps
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	Not Proposed	Nil	Garland drain constructed by Lessee.
4i	Length of Retaining wall or garland drain all along dump	Not Proposed	Nil	Length of garland drain is 412Mx1x1
4j	Number of settling ponds	NIL	NIL	
4k	Specific comments of inspecting officer	Nil		

### **5.0 Solid Waste Management-Backfilling**

SN	Item	Proposals (2017-18)	Actual work (2017-18)	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Backfilling by waste material proposed in area where bauxite completely exhausted.	Backfilling not carried out as OB not generated in the year 2017-18	
5b	Area under backfilling of mined out area	Nil	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Concurrent use of topsoil proposed.	No top soil generated during the year.	Wherever top soil generated is used for restoration & plantation purpose.
5d	Total area fully reclaimed & rehabilitated	NA	NA	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Nil		

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

SN	Item	Proposals (2017-18)	Actual work (2017-18)	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.	To be submitted every year in stipulated time	The PMCP 26(2) of MCDR 2017 report has been send to IBM, Gandhinagar	

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	Proposed in the year 2017-18  i) 0.0500 ii) 100  iii) 260 iv) NIL v) NIL	Actual in the year 2017-18  i) 0.0975 ii) 195 sapling planted  iii) 405 iv) Nil v) 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	-	-							
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	100 sapling	405 saplings planted on backfilled area.							
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Year 2017-18 <table border="1"> <tr> <td>Ambient air quality</td> <td>One</td> </tr> <tr> <td>Water Quality</td> <td>One</td> </tr> <tr> <td>Noise Level survey</td> <td>One</td> </tr> </table>	Ambient air quality	One	Water Quality	One	Noise Level survey	One	Ambient Air monitoring done quarterly once in year (Except monsoon season) Water analysis done quarterly once in a year.	
Ambient air quality	One									
Water Quality	One									
Noise Level survey	One									
6f	General remarks of inspecting officer on PMCP compliance & progressive	Environment monitoring works have been entrusted to the outside consultant and monitoring reports were produced during the inspections. Outcome monitoring values found within permissible limit.								

## **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	631150MT Proposed. Grade wise manual sorting and sizing proposed	130829MT Proposed. Grade wise manual sorting and sizing done.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Manual	Manual	
7c	Different grade of mineral sorted out at mines	Manually	Manually	
7d	Any beneficiation process at	Not proposed	NA	

	mines		
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Bauxite ore is being consumed fully up to its threshold value i.e. 30% Al <sub>2</sub> O <sub>3</sub> as Non Plant Grade (NPG). Only 10-15% recovered as plant grade ore generated from total ROM.	

## **8.0 Environment**

SN	Item	Proposals (2017-18)	Actual work (2017-18)	Remarks								
8a	Separate removal and utilization of topsoil (Rule 32)	Not proposed	Nil	No top soil generated during the plan period								
8b	Concurrent use or storage of topsoil	Not proposed	Nil	Top soil has used whenever its produced for plantation.								
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	In the proposed Mining Plan No soil/OB generation is proposed. 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" data-bbox="644 958 954 1093"> <thead> <tr> <th>Year</th> <th>Volume of waste(M<sup>3</sup>)</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>14344</td> </tr> </tbody> </table>	Year	Volume of waste(M <sup>3</sup> )	2017-18	14344	<table border="1" data-bbox="1013 685 1241 920"> <thead> <tr> <th>Year</th> <th>Volume of waste (M<sup>3</sup>)</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>Nil</td> </tr> </tbody> </table>	Year	Volume of waste (M <sup>3</sup> )	2017-18	Nil	
Year	Volume of waste(M <sup>3</sup> )											
2017-18	14344											
Year	Volume of waste (M <sup>3</sup> )											
2017-18	Nil											
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Overburden proposed to be used for restoring /backfilling of mined out areas	No overburden generated during the year.									
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Part of the mineral exhausted pit proposed to be backfilled and remaining part to be converted into water reservoir. Total 7.38 Ha proposed as water reservoir	Part of the mineral exhausted pit to be backfilled and remaining part to be converted into water reservoir									
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	100 saplings	195 Saplings planted by Lessee in the year 2017-18									
8g	Survival rate	60%	75%									
8h	Water sprinkling on roads to control airborne dust	Water sprinkled proposed on the haul road to suppress the dust.	Mobile water tankers have been deployed for the purpose.									
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	Aesthetic beauty of the area within & surround of mine lease is not that much good due to fewer plantations. Due to water scarcity survival rate is also slow in the ML area.										

## 9.0 Compliance of Rule 45

S.N.	Item	COMMENTS	Remarks
	Status of submission of Monthly and Annual returns	M.R. Submitted upto –Sep-2018 A.R. submitted upto-2017-18	

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	Appointment of Mr. Joshi Jitesh Maganlal as Mining Engineer and Mr N P Shukla as a Geologist is given.	Geologist and Mining Engineer appointed as per rule 55 of MCDR,20107	During the inspection it was advised to Mine representative to submit the AR & MR correctly for correct cost of production & Ex mine price as per the guidelines in future.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Pit- 31.63 ha. Reclaimed/Rehabilitated -0.450 ha, Waste disposal-0.5Ha, Plants/building, etc.—0.98Ha, Others-0.62Ha	
9d	Scrutiny of Annual return on afforestation	Given	0.0975 ha by planting 195 sapling (developing green belt)	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Not Given	NA	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	Cement Grade- 810484MT (Closing stock as on 31.03.18)	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	<u>Given</u>	<u>Limestone</u> -Ex-mine price Rs-397/MT <u>Cost per Tonne- Rs:377/MT</u>	
9i	Scrutiny of Annual return on fixed assets	Given	Fixed Assets Value is given as Rs-317470.	
9k	Scrutiny of Annual return on mining machineries	Given	Excavator (1M <sup>3</sup> )-2 nos Tipper (25MT)- 4nos Wagon drill Machine(100 mm)-1nos Compressor(365cft/m)-1 nos Water tanker-1nos	

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

*Last inspection was carried out 31.10.17 & no outstanding violations were observed. As per the MCDR Amended, Rules,2018 violations of Rule 12(4A) & Rule 24 of MCDR,2017 were pointed and due to non-compliance of these violations, mine was suspended on 03.10.2018. Current inspection was carried out in connection with examination of Review of Mining & evaluation of Start Ratings Template. During inspection, no violations were pointed out as mine was suspended. This mining lease is expiring in the year 2020 (On 31.03.2020) accordingly violation for Rule 12(4A) of Amended MCDR,2018 for carrying out exploration on whole mineralised area within stipulated time & violation for Rule 24 of MCDR,2018 was also pointed for submission of Final Mine Closure Plan. Accordingly, lessee has submitted Modified Mining Plan & Final Mine Closure Plan.*

\*\*\*