

## INSPECTION REPORT

### 1.0 GENERAL

SN	Particulars	Details
1	Name of the Mine	Kenedy Virpur Bauxite Mine
1(b)	Name of Inspecting Officer & Desig.	Sanjay M. Girhe, Sr. Mining Geologist
1(c)	Accompanying Mines Representatives	Sh Vivek Shah, Geologist & Sh. Dilip Ray, Mines Manager
1(d)	Type of Inspection	Review of Mining Plan
1(e)	Date of Inspection	27.09.2017
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Total Lease area-70.8216 ha (Non forest land)
3	Minecode	07GUJ07013
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/10497/2012
5	Name of the lessee, Address, phone, email and fax number	<b>M/s. Prabhudas Vithaldas</b> Mayur Pankh Society, Chopati Road P.O.- Porbandar, Tahsil/Taluka-Porbandar, District-Porbandar, State-Gujarat Pincode-360575 Fax No-0286-2244288 Phone No-0286-2244288 <a href="mailto:prabhudasvithaldas@yahoo.com">Email-prabhudasvithaldas@yahoo.com</a>
6	Village	Virpur, Kenedy
7	Taluka/Mandal	Jam-Kalyanpur
8	District	Devbhumi Dwarka
9	Pincode	361315
10	State	Gujarat
11	Post office	Bhatiya
12	Nearest police station	Bhatiya
13	Nearest Railway station	Bhatiya
14	Date of Grant of Mining Lease	30/05/1963
15	Date of Execution	15/10/1963(for 30 Years)
16	Date of opening of Mine	15/10/1963
17	Date of first Renewal, if applicable and its period & expiry	Date of first Renewal Application- 3/10/1992 Period- 20 Years Expiry -14/10/2013
18	Date of second Renewal, if applicable and its period & expiry	Date of Second Renewal Application- 5/06/2012 Period- 20 Years Expiry Date-Applied on First renewal application on 3 <sup>rd</sup> Oct 1992, Second Renewal on 5 <sup>th</sup> June 2012 in form J & Form D issued by State Government on 19 <sup>th</sup> October 1992 & 13 <sup>th</sup> June 2012 respective lease renewal is under process & as per 24A(6) is deemed to be renewal up to 31/03/2020 under MMDR Amendment Act-2015
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	Mr. Bharat Kumar P Makhecha Address- M/s. Prabhudas Vithaldas Mayur Pankh Society, Circuit Villa, Chopati Road, Porbandar 360 575, Dist: Porbandar, State: - Gujarat Phone-0286-2244288 Fax No-0286-2244288
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Name of the Mine Agent-Dhwanil Antani Address- M/s. Prabhudas Vithaldas Mayur Pankh Society, Circuit Villa, Chopati Road, Porbandar 360 575, Dist: Porbandar, State: - Gujarat. Phone-0286-2244288 Email- <a href="mailto:prabhudasvithaldas@yahoo.com">prabhudasvithaldas@yahoo.com</a>

		Fax No-0286-2244288 Date of Appointment-24/08/2017
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Name of the Mines Manager-Mr. Akash Raj Benn Address- M/s. Prabhudas Vithaldas Mayur Pankh Society, Circuit Villa, Chopati Road, Porbandar 360 575, Dist: Porbandar, State: - Gujarat. Phone-0286-2244288 Email- <a href="mailto:prabhudasvithaldas@yahoo.com">prabhudasvithaldas@yahoo.com</a> Fax No-0286-2244288 Date of Appointment-22/10/2012
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. Akash Raj Benn Qualification:-B.E. (Mining) Total experience- 15.3 Year Address- M/s. Prabhudas Vithaldas Mayur Pankh Society, Circuit Villa, Chopati Road, Porbandar 360 575,Dist: Porbandar, State: - Gujarat Phone-0286-2244288 Email- <a href="mailto:prabhudasvithaldas@yahoo.com">prabhudasvithaldas@yahoo.com</a> Fax No-0286-2244288 Date of Appointment-22/10/2012
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57.	Mr. Akash Raj Benn as Mining Engineer and Mr Narayan Prasad 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.	Modified Mining Plan with Progressive Mine closure Plan approved vide letter No-682(23)MP-405/2007MCCM(N)UDP on dtd- 07/09/2015 for the period=(2015-16 to 2017-18)
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	-
27	Mineral(s) granted in lease and proved for mining	Bauxite
28	Method of Mining(Open cast, Underground)	Open Cast Mining
29	Category (Fully Mechanised, Others or Manual)	Category-A (OTFM)
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	In the ML area under consideration no detailed exploration was carried out. Lessee put trial pits, two trial pits in each block.	Lessee has put trial pits only during mining Plan period. No drilling has been carried out during plan period; Data generated by pitting work were utilized in reserve estimation.	In 2016-17 Lessee has carried out all 6 pits which was proposed for year 2016-17
1b	Exploration over lease area for Geological axis 1 or 2.	No Proposals	The major part of the lease area is under excavation.	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	-	M/s. Prabhudas Vithaldas., <b>M/s. Prabhudas Vithaldas</b> Mayur Pankh Society, Circuit Villa, Chopati Road, Porbandar(Guj) 360 575,Phone no-0286-2244288,Fax no-0286-2244288	

1d	Balance area to be explored to bring Geological axis in 1 or 2	Under the future Exploration in the year 2017-18, total 6 trial pits have proposed	Lease has put all trial pits as proposed in year 2015-16 & 2016-17. Presence of mineralisation in all trial pits reported.	
1e	Balance reserves as on 01.04.2017	Reserves & Resource position as on 01.04.2014 Proved (111)- 6014404MT Resources(211)- 1291600MT	Total Mineral reserve as on 01.04.17 1.Proved Mineral Reserve(111) =3491713 MT 2.Probable Mineral reserve(122) =NIL Total-3491713 MT Resources(211)- 1291600MT	
1f	General remarks of inspecting officer on geology, exploration etc.	Bauxite mineralisation limited to shallow depth of 5 to 7mts and exploration by trial pits may serve the purpose.		

## **2.0 Development**

SN	Item	Proposals (2016-17)	Actual work (2016-17)	Remarks
2a	Location of development w.r.t. lease area	During the year working proposed at strip IV by Block C,D & H & controlled by C-C1, D-D1 & H-H1 sections	Working carried out at proposed locations but partly deviated as working carried out in B & Block I	
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Thickness of topsoil is Nil, Bauxite present in the area with an average thickness of 7m & proposed to be mined out by forming one bench of 7m height and width will be 10m	Number of benches in Ore 1 of height 5mts. OB is in the form of very thin layer.	
2c	Stripping ratio or ore to OB ratio	Ratio was proposed as 2016-17= 1:0.18	Nil	
2d	Quantity of topsoil generation in m <sup>3</sup>	15129 CuM	Nil	
2e	Quantity of overburden generation in m <sup>3</sup>	Nil	Nil	Very less OB encountered in the area.
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Mining lease area consists of very thin layer OB but intercalated clayey material is considered as waste & accordingly year wise proposals are given.		

## **3.0 Exploitation**

SN	Item	Proposals (2016-17)	Actual work (2016-17)	Remarks
3a	Number of pits proposed for production	During the year working proposed at strip IV by Block C,D & H & controlled by C-C1, D-D1 & H-H1 sections	Working carried out at proposed locations but partly deviated as working carried out in B & Block I	
3b	Quantity of ROM mineral production proposed	839398 MT	162659 MT	
3c	Recovery of salable/usable mineral from ROM production	797428 MT	162659 MT	

3d	Quantity of mineral reject generation	No Proposals	Nil	
3e	Grade of mineral reject generation and threshold value declared	No Proposals	Nil	
3f	Quantity of sub-grade mineral generation	No Proposals	Possibility of production of subgrade material not discussed in approved MP. Bauxite ore is being utilized up to threshold value of 30% Al <sub>2</sub> O <sub>3</sub>	
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	Beneficiation study not proposed	Nil	
3j	Provision of drilling & blasting in mineral benches	Drilling and blasting will be required for 30% of ROM bauxite production only.	Quantity of explosive consumed during year : Nil	
3k	Provision of mining machineries in mineral benches	Excavator (2M <sup>3</sup> )-2 nos, Tipper(25MT)-04 nos, Jack Hammer(32mm)-6nos Compressor(100cft/m)-1 nos, Water Tanker-2	Excavator (2M <sup>3</sup> )-2 nos, Tipper(25MT)-04 nos, Jack ammer(32mm)-6nos, Compressor(100cft/m)-1 nos, Water Tanker-2 nos	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Thickness of topsoil is Nil. Bauxite present in the area with an average thickness of 7m will be mined out by forming one bench of 7m height and width will be 10m	In ore the height of bench is maintained as 6-7mts. Whereas no separate bench in OB as very thin layer OB encountered in the area.	
3m	Total area covered under excavation/pits	38579 M <sup>2</sup>	2016-17= 2000M <sup>2</sup>	
3n	Ore to OB ratio for the pit/mine during the year	1:0.18	1:0:10	
3o	Total area put in use under different heads at the end of year	As per approved MS(2013-14 to 2017-18) Pit-52.1729 ha. Mineral reject-0.080 Minera Others-5.81 Total-51.0253 ha.	As on 01.04.2017 Pit-44.829 ha. Reclaimed & Rehabilitated - 1.30 Waste Dump-3.24 Infrastrucure-2.94 Total-53.27 ha.	
3p	Production of ROM mineral during last five-year period, as applicable	Yr-2015-16=267935 MT Yr-2016-17=839398 MT Yr-2017-18=686750 MT	Yr-2015-16=760274 MT Yr-2016-17=162659 MT	
3q	General remarks of inspecting officer on method of mining etc.	Production of Bauxite ore reduced against the proposed target for the 2016-17 due to less overseas demand.		

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

SN	Item	Proposals (2016-17)	Actual work (2016-17)	Remarks
4a	Separate dumping of topsoil,	<u>Top soil Management</u>	Year wise top soil	

	OB & mineral reject (Rule 32, 33)	Year wise top soil generation will be 2016-17= 8210 M <sup>3</sup> 2017-18= Nil Generated top soil proposed to be spread over statutory barrier for plantation Mineral Waste 2016-17=NIL M <sup>3</sup> 2017-18=3735 M <sup>3</sup> Mineral waste proposed to be backfilled	generation is 2015-16=Nil 2016-17=Nil	
4b	Location of topsoil, OB & mineral reject dumps	Concurrent use of top soil for plantation purpose proposed. Whereas mineral waste proposed to be stacked in mined out pit for reclamation purpose.	No top soil generated during the 2016-17 & 2017-18 due to less development.	
4c	Number of dumps within lease area and outside lease area	No proposal	Existing mineral waste are dumped in mined out pit.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No Proposals	Existing ROM waste dumps in mined out area on temporary basis.	
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	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 of waste material will be done in such area where bauxite mineral has been mine out up to complete thickness & no bauxite mineral is available	Backfilling of waste material is being done in such area where bauxite mineral has been mine out up to complete thickness & no bauxite mineral is available	
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)	<u>Top soil use</u> Year wise top soil generation will be 2015-16= 13396M <sup>3</sup> 2016-17= 8210 M <sup>3</sup> 2017-18= Nil The soil generated during Modified mining plan period propose to spread over statutory barrier for plantation	Year wise top soil generation is 2015-16=NIL 2016-17=NIL	
5d	Total area fully reclaimed & rehabilitated	Reclamation and rehabilitation of the pit by means used as water reservoir. The waste generated during mining proposed to be backfilled in very limited areas.	We have planted 300 nos of sapling in 0.15 ha backfilled area.	
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	Yes	Submitted within stipulated time	
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	Nil	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	(i) NIL (ii) 0.1500 Ha (iii) 300 Nos (iv) NA (v) Nil	The Overburden as soil has utilized in plantation, stacking on old plantation, garland maintains well as road repairing work We have planted 300 nos of sapling in 0.15 ha backfilled area.	Survival rate is low due to scarcity of water

6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	NA	Nil	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Air quality, Water quality & Noise quality monitoring proposed at regular interval	Env. Parameters monitoring is being carried out by outsourced consultant on regular interval.	
6f	General remarks of inspecting officer on PMCP compliance & progressive	Environmental monitoring entrusted to the outsourced consultant & relevant reports were produced during mines 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	Grade-wise sorted within lease area proposed to be despatched	grade-wise sorting within lease area Cement Grade-408802MT & 23347 Refractory grade ore despatched	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Proposed as Manual	Done by Manual means	
7c	Different grade of mineral sorted out at mines	Yes	i) PG (Al <sub>2</sub> O <sub>3</sub> >52%) ii) NPG (Al <sub>2</sub> O <sub>3</sub> 30 to <52%)	
7d	Any beneficiation process at mines	No Proposals	NA	To achieve the desired grade of ore hand sorting is practised.
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Violation of provisions of rule 11(1), 14, 28(1) and 33 were pointed out and violation letter was issued for its rectification.		

### **8.0 Environment**

SN	Item	Proposals (2016-17)	Actual work (2016-17)	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Proposed as 8210 M <sup>3</sup>	Nil.	
8b	Concurrent use or storage of topsoil	Proposed	Used for plantation at Statutory barrier & backfilled area	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposed at mined out areas	No OB top soil generated during the year.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Proposed	Used for plantation over Statutory barrier & backfilled area	

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Yes, proposed	Yes, it is being carried out	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	300 saplings proposed to be planted over statutory barrier & backfilled are	Planted 300 nos of sapling in 0.11 ha backfilled area.	
8g	Survival rate	NA	About 65%	
8h	Water sprinkling on roads to control airborne dust	It is proposed to sprinkling water on haul road regularly	Sprinkling of water on haul road being carried out	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	Due to lack of water and top soil, plantation is not carried out up to that extent by the lessee. Sometime lessee is procuring top soil from outside also for plantation purpose.		

### 9.0 Compliance of Rule 45

S.N.	Item	COMMENTS	Remarks
	Status of submission of Monthly and Annual returns	M.R. Submitted till the month of inspection date A.R. submitted for the year 2016-17 submitted within stipulated time.	Submitted

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	Name of the Mining Engineer- Mr. Akash Raj Benn, ME & Mr Narayan Prasad Shukla, Geologist appointed	Both Mining Engineer & Geologist were present during the inspection	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	As per approved MS(2013-14 to 2017-18) Pit-52.1729 ha. Mineral reject-0.080 Minera Others-5.81 Total-51.0253 ha.	As on 01.04.2017 Pit-44.829 ha. Reclaimed & Rehabilitated - 1.30 Waste Dump-3.24 Infrastrucure-2.94 Total-53.27 ha.	
9d	Scrutiny of Annual return on afforestation	300 Saplings proposed to be planted	300 Saplings planted with survival rate of about 65%	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Not Given	Nil	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	<u>Opening stock</u> Cement-758991MT Refractory- 124MT <u>Production</u> Cement-132264MT Refractory- 30395MT <u>Despatched</u> Cement-408802MT Refractory- 23347MT	It is advised to furnish correct figure & should be matched with actual quantity being stocked at mine site	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	<u>Ex-mine price</u> Cement Grade-390/MT Refractory-500/MT <u>Cost of Prodn-532/MT</u>	<u>Ex-mine price</u> Cement Grade-390/MT Refractory-500/MT <u>Cost of Prodn-532/MT</u>	



9i	Scrutiny of Annual return on fixed assets	Fixed assets value (Rs-'000)- 16966927 is given	Fixed assets value (Rs-'000)- 16966927 is given	
9k	Scrutiny of Annual return on mining machineries	Excavator (2M <sup>3</sup> )- Tipper(25MT,Jack Hammer,etc.	Excavator (2M <sup>3</sup> )- Tipper(25MT,Jack Hammer,etc.	

10- Details of violations observed during current inspection and compliance position of earlier violation pointed out: -The last inspection of mine was carried out on dtd 07.01.2013 and violations of rules 12(3), 23F, 23E(2) & 42(1)(c)(ii) were observed and these violation rectified by the lessee vide letter No-Nil dtd 04.02.2013. This inspection was carried out in connection with Review of Mining Plan and during the inspection violation of rules 11(1), 14, 28(1) & 33 of MCDR, 2017 were pointed for its rectification and violation letter was issued on dt 30.10.2017.

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