

**INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/BXT/RGD/MCDR-1/BBS

Mine code : 07ORI27001

- (i) Name of the Inspecting : **3006**) **SHRI B L GURJAR**
Officer and ID No.
- (ii) Designation : Regional Controller Mines
- (iii) Accompanying mine : **MUKESH JHA, AGENT, Sri Sanjay Pardhi (Mines Manager),**
Official with
Designation
- (iv) Date of Inspection : 13/10/2022
- (v) Prev.inspection date : 08/10/2021

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **BAPHLIMALI BAUXITE MINE**
- (b) **Registration NO.** : **IBM/75/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : RAYGADA
- Village : PAIK-KUPAKHAL
- Taluka : KASHIPUR
- Post office : MAI KUNCH
- Pin Code : 765015
- FAX No. : 06865-287100
- E-mail : utkal.alumina@adityabirla.()
- Phone : 06865-287040
- (f) Police Station : Andirakanch
- (g) First opening date : 03/11/2012
- (h) Weekly day of rest : SUN
2. Address for : AT- DORAGUDA, PO- KUCHEIPADAR,
correspondance VIA- TIKIRI, DIST-RAYAGADA
ODISHA-765015
3. (a) Lease Number : ORI0676
- (b) Lease area : 1388.74
- (c) Period of lease : 30
- (d) Date of Expiry : 16/02/2028
4. Mineral worked : BAUXITE Main

5. Name and Address of the

Lessee : M/S UTKAL ALUMINA INTERNATIONAL LIMITED
 RANIGUDA FARM LANE RAYAGADA
 - 765001 ORISSA RAYGADA
 ORISSA
 Phone:06856-224193
 FAX :06856-223278

Owner : M/S UTKAL ALUMINA INTERNATIONAL LIMITED
 RANIGUDA FARM LANE RAYAGADA
 - 765001 ORISSA RAYGADA
 ORISSA
 Phone: 06856-224193
 FAX : 06856-223278

Agent : SHRI MUKESH JHA
 BAPHLIMALI BAUXITE MINES
 RAYGADA ORISSA
 Phone:
 FAX :

Mining Engineer

Name : SHRI SUBHRANSU BHUSAN SAHU,Full Time
 Qualification : BE MINING
 Appointment/ : 26/11/2019
 Termination date

Geologist

Name : SHRI K C JYOTISHI,Full Time
 Qualification : MSC GEOLOGY
 Appointment/ : 01/12/2018
 Termination date

Manager

Name : SHRI SANJAY PARDHI
 Qualification : BE MINING
 Appointment/ : 20/04/2021
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	01/11/2012
Plan/Scheme of Mining	:	Modif.approved Mining Scheme	03/09/2014
	:	MP modif under 17(3) MCR 2016	11/11/2016
	:	MP modif under 17(3) MCR 2016	07/05/2018
	:	MS modif under MCR 1960	24/07/2020
	:	MS modif under MCR 1960	09/11/2021

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NIL	NIL	NIL
1b	Exploration over lease area for geological axis 1 or 2	No proposal. Lease area of 980.00 ha has been expored into G1 level. Unexplored lease area of 408.740 ha is Nonmineralize d slope area.	NIL	As Bauxite mineralisation is abundant in platue areas. The steeply sloping area is inaccessible for exploration and kept under unexplored category.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not applicable	NIL	NIL
1d	Balance area to be explored to bring Geological axis in 1 or 2	Lease area of 980.00 ha has been expored into G1 level. Unexplored lease area of 408.740 ha is Nonmineralize d slope area.	Lease area of 980.00 ha has been expored into G1 level. Unexplored lease area of 408.740 ha is Nonmineralized slope area.	Lease area of 980.00 ha has been expored into G1 level. Unexplored lease area of 408.740 ha is Nonmineralized slope area.
1e	Balance reserve as on 01/04/20	In the Modification of review of mining plan, approved on 24.07.2020 the Bauxite reserves are 173.153 mil.t. and resources of 6.253 mil.tons	Due to depletion/addition over the period of time the updated bauxite reserves as on 01.04.2021 are 167.853 Mil.t. and resources are 6.25 mil.tons	Due to depletion/addition over the period of time the updated bauxite reserves as on 01.04.2021 are 167.853 Mil.t. and resources are 6.25 mil.tons

1f	General remarks of inspecting officers on geology, exploration etc	BALACE RESERVE AS ON 01.04.2022 = 161.108 Mt	Lease area of 980.00 ha has been expored into G1 level. Unexplored lease area of 408.740 ha is Nonmineralized slope area.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	2139950 to 2141480 N & 707326 to 2141480 E.	2139950 to 2141480 N & 707326 to 2141480 E.	WORKING WITHIN THE PROPOSED AREA.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	The thickness of topsoil is vey thin. Therefore no separate topsoil bench has been proposed. Scrapping of topsoil separetely is proposed. separate benches in overburden and mineral are proposed.	Separate benches in overburden and mineral are mainatined. Overburden- Bench-1 Ore-Bauxite- Bench- 2 to 4	Separate benches in overburden and mineral are mainatined.
2c	Stripping ratio or ore to OB ratio	1 : 0.40	1 : 0.39 t/cu.m.	1 : 0.39 t/cu.m.
2d	Quantity of topsoil generation in m3	65000	46350 CUM	46350 CUM
2e	Quantity of overburden generation in m3	2415532 m ³	2381163 m ³	OB GENERATED 2381163 m ³

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	The lessee has carried out the development work as per the proposal during the reporting year. Development is carried out by opencast mining method.	The lessee has carried out the development work as per the proposal during the reporting year. Development is carried out by opencast mining method. Mine is beautifully maintained.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	01 pit	01PIT	ONE PIT
3b	Quantity of ROM mineral production proposed	6038502 tonne	5998340 tonne	PRODUCTION 5998340 tonne
3c	Recovery of sailable/usable mineral from ROM production	100%	99.3 %	
3d	Quantity of mineral reject generation	NIL	NIL	
3e	Grade of mineral rejects generation and threshold value declared.	NOT APPLICABLE	NIL	
3f	Quantity of sub grade mineral generation.	75187	75182	GRADE +30 -40% Al2O3 -7% SiO2 (total)
3g	Grade of sub grade mineral generation	+30 -40% Al2O3 -7% SiO2 (total)	+30 -40% Al2O3 -7% SiO2 (total)	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised	Mechanised

3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	NIL	NIL	
3j	Provision of drilling and blasting in mineral benches	100% OB and 50% Ore benches	100% OB and 50% Ore benches	100% OB BENCHES and 50% IN Ore benches
3k	Provision of mining machineries in mineral benches	Shovel and dumper combination is proposed for excavation and hauling.	Shovel and dumper combination is proposed for excavation and hauling.	Shovel and dumper combination is proposed for excavation and hauling.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	The height of the bench proposed is 6m.	The height of the bench is suitable for the method of mining proposed in mining plan.	The height of the bench is suitable for the method of mining proposed in mining plan.
3m	Total area covered under excavation/pits	189.060 Ha	189.060 Ha	
3n	Ore to OB ratio for the pit/mine during the year.	1 : 0.40	1:0.39 t/cu.m.	1:0.39 t/cu.m.
3o	Total area put in use under different heads at the end of year	227.595 Ha	227.095 Ha	
3p	Production of ROM mineral during the last five year period as applicable	27333353 TONNE	2017-18 : 4368000 t 2018-19 : 5299500 t 2019-20: 5297000 t 2020-21: 5299830 t 2021-22: 5998340 T	LAST 05 YEARS TOTAL PRODUCTION : 26262670 TONNE.
3q	General remarks of inspecting officers on method of mining etc.		26262670TONNE The ROM production has been carried as proposed and the prodcuton is carried out by opencast mining method as proposed.	The ROM production has been carried as proposed and the prodcuton is carried out by opencast mining method.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Proposal of stacking of Topsoil generated and use of the same in plantation purpose. No dumping proposal of OB generated. It is proposed to backfill the mined out area by using waste/OB generated. Proposal of blending of subgrade/mineral rejects generated.	The topsoil generated has been stacked and used for plantation purpose. The waste/OB generated has been used for backfilling. The mineral rejects blended during excavation and no separate stacking.	The topsoil generated has been stacked and used for plantation purpose. The waste/OB generated has been used for backfilling. The mineral rejects blended during excavation and no separate stacking.
4b	Location of topsoil, OB and mineral reject dumps	There is no proposal of dumping of OB/mineral reject during the year 2021-22.	The OB/ waste has been used for backfilling as per proposal.	The OB/ waste has been used for backfilling as per proposal.
4c	Number of dumps within lease area and outside of lease area	Only one dump, Dump-1 already exist within the lease area.	Only one dump, Dump-1 already exist within the lease area.	Only one dump, Dump-1 already exist within the lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Only one dump, Dump-1 already exist within the lease area. The same will be rehandled and will be back filled.	Dump-1 already exist within the lease area. The same is being rehandled and being bck filled.	Dump-1 already exist within the lease area. Back filling of the same commenced.
4e	Number of active and alive dumps.	01	01	
4f	Number of dead dumps.	NIL	NIL	
4g	Number of dumps established.	NIL	NIL	

4h	Whether Retaining wall or garland drain all along dumps are there.	Already exist for Dump-1, the existing dump.	Already exist for Dump-1, the existing dump.	Retaining wall or garland drain maintained around the existing dump.
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall-150 m, Garland drain-500 m already exists.	Retaining wall-150 m, Garland drain-500 m already exists.	Retaining wall-150 m, Garland drain-500 m already exists. Repairing of old retaining wall carried.
4j	Number of settling ponds	No proposal	04 settling ponds exists.	04 settling ponds exists.
4k	Specific comments of inspecting officer on waste dump management		The waste material generated has been used for backfilling purpose. Retaining wall-150 m, Garland drain-500 m already exists. Repairing of old retaining wall carried.	Retaining wall, garland drain & settling tanks already exists around the waste dump. The waste material generated has been used for backfilling purpose.

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Full extraction of mineral from mined out area before starting backfilling proposed.	Full extraction of mineral from mined out area before backfilling carried.	Full extraction of mineral from mined out area before comencement of backfilling carried.
5b	Area under backfilling of mined out area	22.00 Ha	22.09 Ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use for plantation	Concurrent use for plantation	
5d	Total area fully reclaimed and rehabilitated	Rec laimed-22 Ha Rehabilitated-15 Ha	Reclaimed-22.09 Ha Rehabilitated-15 Ha	

5e	General remarks of inspecting officers on backfilling and reclamation etc.	Concurrent backfilling cum reclamation was being practiced in the mined out area as proposed during the reporting year.	Concurrent backfilling cum reclamation was being practiced in the mined out area as proposed during the reporting year.
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Progressive Mine Closure Plan:

Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	As per Rule 26(2) Annual PMCP report to be submitted before 1st day of July of Every Year	Submitted within the stipulated time period for the reporting year.	Submitted within the stipulated time period for the reporting year.
6b	Area available for rehabilitation (ha) .	15 Ha	15 Ha	
6c	afforestation done (ha).	35 Ha	35 Ha	Plantation carried as per proposal.
6d	No. of saplings planted during the year	87500	88200	
6e	Cumulative no .of plants	Not specified.	417670 plantation carried	417670 plantation carried .
6f	Any other method of rehabilitation	NIL	NIL	NIL
6g	Cost incurred on watch and care during the year	NOT SPECIFIED.	SEPARATELY NOT CALCULATED.	WATCH AND CARE OF PLANTATION CARRIED WHICH IS EVIDENT DURING FIELD INSPECTION.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	22.00Ha	22.09 HA	

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	22.00Ha	22.09Ha	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	15.00 Ha	15.00 Ha	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NIL	NIL	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NIL	NIL	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	20.00 Ha	20.00 Ha	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	15.00 Ha	15.00 Ha	15 HA OF AREA REHABILITATED.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	PLANTATION	PLANTATION	PLANTATION CARRIED

6p	Compliance of environmental monitoring (core zone and buffer zone)	Periodical Monitoring as stipulated in Environment Clearance granted by MoEF & CC and Consent to Operate granted by SPCB will be done.	Periodical Monitoring as stipulated in Environment Clearance granted by MoEF & CC and Consent to Operate granted by SPCB is carried out.	Periodical Monitoring as stipulated in Environment Clearance granted by MoEF & CC and Consent to Operate granted by SPCB is carried out.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		Periodical Monitoring as stipulated in Environment Clearance granted by MoEF & CC and Consent to Operate granted by SPCB is carried out.	The lessee has carried out afforestation and environmental monitoring as per the proposal during the reporting year.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade-wise sorting of mineral is propsoed.	Grade-wise sorting of mineral in mechanised way is being practiced witin the reporting year.	Grade-wise sorting of mineral in mechanised way is being practiced witin the reporting year.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanised.	Mechanised.	
7c	Different grade of mineral sorted out at mines.	+30-40% Al2O3 and +40% Al2O3	+30-40% Al2O3 and +40% Al2O3	
7d	Any beneficiation process at mines	Not proposed.	NIL	

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	NIL	No beneficiation process was proposed during the reporting year. The lowgrade mineral blended with high grade and used.	No beneficiation process was proposed during the reporting year. The lowgrade mineral blended with high grade and used.
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Separate removal by scraping of topsoil proposed and use for backfilling/plantation.	Separate removal by scraping of topsoil proposed and use for backfilling/plantation is being praticed during the reporting year.	Separate removal by scraping of topsoil proposed and use for backfilling/plantation is being praticed during the reporting year.
8b	Concurrent use or storage of topsoil	Concurrent use of topsoil is proposed.	Concurrent use of topsoil is carried out for plantation purpose during the reporting year.	Concurrent use of topsoil is carried out for plantation purpose during the reporting year.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No separate dumping proposal	The waste /OB has been used for backfilling and mineral reject used for blending purpose.	The waste /OB has been used for backfilling and mineral reject used for blending purpose.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	OB/waste is proposed for backfilling of mined out area.	OB/waste was used for backfilling of mined out area.	

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Concurrent backfilling and plantation has been proposed.	Concurrent backfilling and plantation is being practiced during the reporting year.	Concurrent backfilling and plantation is being practiced during the reporting year.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	80000 nos sapplings	88000 nos sapplings	
8g	Survival rate	60 %	69% survival rate during the reporting year.	69% survival rate during the reporting year.
8h	Water sprinkling on roads to control airborne dust	Regular sprinkling by mobile & fixed water sprinkler	Water sprinkling by water tanker over haul roads has been carried out. Stationary sprinkler system has been fixed along the haul roads. Using of mist cannon to control the airborne dust.	Water sprinkling by water tanker over haul roads has been carried out. Stationary sprinkler system has been fixed along the haul roads. Using of mist cannon to control the airborne dust.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Lessee has planted 88000 nos of sapling within the lease area. Water sprinkling by water tanker over haul roads has been carried out. Stationary sprinkler system has been fixed along the haul roads. Using of mist cannon to control the airborne dust.	Lessee has planted 88000 nos of sapling within the lease area. Water sprinkling by water tanker over haul roads has been carried out. Stationary sprinkler system has been fixed along the haul roads. Using of mist cannon to control the airborne dust.

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly returns and annual return for have been submitted within the stipulated time period.	Monthly returns and annual return for have been submitted within the stipulated time period.	Monthly returns and annual return for have been submitted within the stipulated time period.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Employment of Mining Engineer, Geologist and Manager mentioned in the Annual return	Mines manager, Mining engineer & Geologist were present during the inspection.	Mines manager, 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.	Pit =189.560 .210ha OB Dump =12.552 ha Infrastructure & Road=30.244 ha Mineral Storage =2.391 ha Reclaimed & rehabilitated= 103.960 ha	Pit =189.560 .210ha OB Dump =12.552 ha Infrastructure & Road=30.244 ha Mineral Storage =2.391 ha Reclaimed & rehabilitated= 103.960 ha	
9d	Scrutiny of Annual return on afforestation	88000	88000 sapplings	88000 sapplings inside lease area 5600 out side lease area.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	0	Nil	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening stock : 200040 tonne Production: 5998340 tonne Closing stock: 199490 tonne	Opening stock : 200040 tonne Production: 5998340 tonne Closing stock: 199490 tonne	Opening stock : 200040 tonne Production: 5998340 tonne Closing stock: 199490 tonne
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex. Mine Price- Rs. 772.92	Ex. Mine Price- Rs. 772.92	Ex. Mine Price- Rs. 772.92

9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets (in .) 8250783877	Value of Fixed Assets (in .) 8250783877	Value of Fixed Assets (in .) 8250783877
9k	Scrutiny of Annual return on mining machineries	Back Hoe- 4.8 Cum: 3 Nos Back Hoe- 4.5 Cum: 3 Nos Back Hoe- 1.1 Cum: 3 Nos Dumper- 55 tonne: 9 Nos Dumper- 60 tonne: 8 Nos Dozer- 3 Nos BLAST HOST DRILL: 4 Nos	Back Hoe- 4.8 Cum: 3 Nos Back Hoe- 4.5 Cum: 3 Nos Back Hoe- 1.1 Cum: 3 Nos Dumper- 55 tonne: 9 Nos Dumper- 60 tonne: 8 Nos Dozer- 3 Nos BLAST HOST DRILL: 4 Nos	CRUSHER 1425.000 T/H = 01, MOTOR GRADER -01

Details of violations observed during current inspection and compliance position of violation pointed out

Violation observed: NIL

Show cause position

Rule NO.

Issued on Compliance on

Rule NO.

Issued on Compliance on

NO VIOLATION OBSERVED.

Date :

(SHRI B L GURJAR)

Indian Bureau of Mines