

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/BXT/KPT/MCDR-03/BBS

Mine code : 07ORI09004

- (i) Name of the Inspecting : **RAM**) **RAMKISHAN R**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri R Vinchurkar, Mine Manager
Official with
Designation
- (iv) Date of Inspection : 03/09/2021
- (v) Prev.inspection date : 15/01/2020

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **PANCHPATMALI (S BLOCK)**
- (b) **Registration NO.** : **IBM/116/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KORAPUT
- Village : PANCHPATMALI
- Taluka : KORAPUT
- Post office : DAMANJODI
- Pin Code : 763008
- FAX No. : 0674-2300521
- E-mail : dirprod@nalcoindia.co.in
- Phone : 0674-2301988
- (f) Police Station : Kakiriguma
- (g) First opening date : 01/01/2017
- (h) Weekly day of rest : SUN
2. Address for : PANCHAPATAMALI (SOUTH BLOCK) BAUXITE MINE
correspondance M/S NALCO, PO-DAMANJODI
DIST- KORAPUT, PIN- 763008
3. (a) Lease Number :
- (b) Lease area :
- (c) Period of lease :
- (d) Date of Expiry :
4. Mineral worked : BAUXITE Main

5. Name and Address of the

Lessee : M/S NALCO LTD
 NALCO Bhavan P/1,Nayapalli
 BHUBANESWAR KHURDA ORISSA
 Phone:
 FAX :

Owner : M/S.Nalco
 P/1,Nayapalli Bhubaneswar
 KHURDA ORISSA
 Phone: 0674 442301,2.3
 FAX : 06853 32214,32

Agent : SHRI ARUN KUMAR DAS
 AT- PANCHPATMALI PO-
 DAMANJODI KORAPUT KORAPUT
 ORISSA
 Phone:
 FAX :

Mining Engineer

Name : Rajesh J.Vinchukar,Full Time
 Qualification : B.E.(Mining)
 Appointment/ : 22/05/2017
 Termination date

Geologist

Name : Shri G.Chaterjee,Full Time
 Qualification : M Tech
 Appointment/ : 13/10/2016
 Termination date

Manager

Name : Purosottam Mohanta
 Qualification : BE(Mining)
 Appointment/ : 26/06/2017
 Termination date

6. Date of approval of Mining	:	MP review under 17(1) MCR 2016	14/11/2018
Plan/Scheme of Mining	:	Modif.approved Mining Scheme	03/03/2021

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No such specific proposal.	Nil	
1b	Exploration over lease area for geological axis 1 or 2	326.54 ha has been explored as G1 level. The rest unexplored 201.722 ha is along the periphery of the deposit which are having high gradient and where drilling is not possible.	326.54 ha has been explored as G1 level. The rest unexplored 201.722 ha is along the periphery of the deposit which are having high gradient and where drilling is not possible.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year		Nil	
1d	Balance area to be explored to bring Geological axis in 1 or 2	326.54 ha has been explored as G1 level. The rest unexplored 201.722 ha is along the periphery of the deposit which are having high gradient and where drilling is not possible.	326.54 ha has been explored as G1 level. The rest unexplored 201.722 ha is along the periphery of the deposit which are having high gradient and where drilling is not possible.	

1e	Balance reserve as on 01/04/20	As per the approved Mining Plan dated 03.03.2021, the Reserves are 80.462 million tonnes and resources are 9.611 million tonnes.	due to depletion/addition over the period of time the updated bauxite ore reserves as on 01.04.2021 are 79.99 mil.t. and resources are 9.11 mil.t.
1f	General remarks of inspecting officers on geology, exploration etc		All the potentially mineralised area has been explored under G1 level.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Area-1, Northern part during the year 2020-21.	Area-1 northern part	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in OB and Bauxite are envisaged. no top soil generation is envisaged.	Separate benches in OB and Bauxite are made.	
2c	Stripping ratio or ore to OB ratio	1:0.1 t/cu.m.	1:0.09 t/cu.m.	
2d	Quantity of topsoil generation in m3	Nil	Nil	
2e	Quantity of overburden generation in m3	109400 cu.m. during the year 2020-21.	79250 cu.m.	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		development is carried out by opencast mining method.	

Exploitation:

Sl.No.	Item	Proposals	Actual work	Remarks
3a	Number of pit proposed for production	1	1	
3b	Quantity of ROM mineral production proposed	1000100 t during the year 2020-21.	804450 t	
3c	Recovery of salable/usable mineral from ROM production	1000100 t	804450 t	
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.	Not applicable	Nil	
3g	Grade of sub grade mineral generation	Not applicable	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised.	Mechanised.	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not applicable	Nil	

3j	Provision of drilling and blasting in mineral benches	drilling and blasting is proposed.	Bauxite are loosened by the use of ripping method in place of 100% conventional drilling and blasting method. Hard, compact and not amenable for ripping by ripper dozers will be loosened by using controlled blasting
3k	Provision of mining machineries in mineral benches	shovel and dumper combination is proposed for excavation and hauling	shovel and dumper combination is deployed for excavation and hauling.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Aluminous Laterite 2.00 mtrs Bauxite 8.00 Mtrs	maintained.
3m	Total area covered under excavation/pits	63.921 ha at the end of plan period i.e. year 2023-24.	16.62 ha
3n	Ore to OB ratio for the pit/mine during the year.	1:0.1 t/cu.m.	1:0.09 t/cu.m.
3o	Total area put in use under different heads at the end of year	139.165 ha at the end of plan period. i.e. year 2023-24	73.398 ha
3p	Production of ROM mineral during the last five year period as applicable	2017-18: 606450 tonnes 2018-19: 6,07,500 tonnes 2019-20: 1000100 tonnes 2020-21: 1000100 tonnes	2017-18: 258750 tonnes. 2018-19: 589100 tonnes 2019-20: 456900 tonnes 2020-21: 804450 tonnes
3q	General remarks of inspecting officers on method of mining etc.		production is carried out by opencast mining method as proposed.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No external dumping proposal & mineral reject generation. However, the overburden material/aluminous laterite is proposed for concurrent backfilling	no separate dump for the same was made. The OB & waste generated was backfilled in the mined out areas concurrently.	
4b	Location of topsoil, OB and mineral reject dumps	The OB/aluminous laterite has been proposed to be backfilled concurrently and no proposal for mineral rejects generation. So, no separate dumps for the same has been made.	The OB/aluminous laterite generated was backfilled concurrently in the mined out areas	
4c	Number of dumps within lease area and outside of lease area	Not applicable	Nil	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not applicable	Nil	
4e	Number of active and alive dumps.	Not applicable	Nil	
4f	Number of dead dumps.	Not applicable	Nil	
4g	Number of dumps established.	Not applicable	Nil	

4h	Whether Retaining wall or garland drain all along dumps are there.	Not applicable Nil	
4i	Length of Retaining wall or garland drain all along dumps	Not applicable Nil	
4j	Number of settling ponds	Not applicable Nil	
4k	Specific comments of inspecting officer on waste dump management		Concurrent backfilling is done in the mined out areas.

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.	Concurrent backfilling of mined out area is proposed.	Concurrent backfilling in the mined out area is being practised.	
5b	Area under backfilling of mined out area	0.48 ha during the year 2020-21.	0.48 ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not applicable Nil		
5d	Total area fully reclaimed and rehabilitated	Not applicable Nil		
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Concurrent backfilling of mined out areas is being practised	

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	PMCP report to submitted. submitted before 1 st July		
6b	Area available for rehabilitation (ha) .	Not applicable	Nil	
6c	afforestation done (ha).	Nil	7.4 ha	
6d	No. of saplings planted during the year	Nil	23300 nos	along the safety zone
6e	Cumulative no .of plants		48209 nos	
6f	Any other method of rehabilitation	Not applicable	Nil	
6g	Cost incurred on watch and care during the year		Not ascertained.	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Not applicable	Nil	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	0.48 ha during the year 2020-21.	0.48 ha	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	Not applicable	Nil	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not applicable Nil	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not applicable Nil	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not applicable Nil	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not applicable Nil	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not applicable Nil	
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.	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.		PMCP measures were carried out as proposed.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	The entire ROM bauxite is usable. grade wise sorting is proposed.	grade wise sorting is carried out.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	mechanical	mechanical	
7c	Different grade of mineral sorted out at mines.	below 40%Al ₂ O ₃ and above 40 Al ₂ O ₃ .	below 40%Al ₂ O ₃ and above 40 Al ₂ O ₃ .	
7d	Any beneficiation process at mines	Not applicable	Nil	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		The entire ROM produced from the mining operations are supplied to the Alumina plant.	

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Not applicable	Nil	
8b	Concurrent use or storage of topsoil	Not applicable	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Not applicable	Nil	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Concurrent backfilling of overburden/aluminous laterite is proposed in the mining plan.	Concurrent backfilling of overburden/aluminous laterite is in practice
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	concurrent backfilling of mined out area was proposed	carried out
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Nil	23300
8g	Survival rate		80%
8h	Water sprinkling on roads to control airborne dust	water sprinkling on haul roads for dust suppression is proposed	carried out
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Aesthetic beauty in and around the mine is well maintained.

Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly and annual returns are to be submitted as per rule 45 of MCDR, 2017	submitted.	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer 5, Geologist 2	found to be in order.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) Workings 16.620 ha, Occupied by plant, buildings, residential, welfare buildings & roads 52.340 ha, etc.,	found to be in order.
9d	Scrutiny of Annual return on afforestation	23300 nos	found to be in order.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM closing stock is Nil	found to be in order.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	prodcution cost is Rs.937.78/t	prodcution cost is Rs.937.78/t
9h	Scrutiny of Annual return on fixed assets	Rs. 482531761	Rs. 482531761
9k	Scrutiny of Annual return on mining machineries	DUMPER 55.000 TONNE 4, WHEEL LOADER 8.700 CUM 2, DOZER 850.000 HP 2 etc.,	found to be in order.

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

Violation observed		Show couse position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on

Date :

(RAMKISHAN R)

Indian Bureau of Mines