

INDIAN BUREAU OF MINES
MCDR INSPECTION REPORT
Bhubaneswar Region

General

SL. No.	Particulars	Details
1.	Name of the Mine	Panchpatmali (South Block) Bauxite mine
2.	Date of Inspection	04/10/2024
3.	Name of Inspection officer:	Shri Rohita Sethi, Assistant Controller of Mines
4.	Name of official accompanying inspection	Sh. R. J. Vinchurkar, Mines Manager Sh. R. B. Singh, Mining Engineer Sh. P. T. Sahoo, Geologist
5.	Last date of Inspection & Officer	03/11/2023, Shri Rajesh Kumar Das (DCOM)
6.	Total Lease Area (Ha) with breakup of non-forest and forest land	Total Lease Area : 528.262 Ha Forest: 189.552 Ha, Non Forest: 338.710 Ha.
7.	Mine code	070R109004
8.	IBM Registration Number under rule 45 of MCDR, 2017	IBM/116/2011
9.	Name of the lessee, Address, phone, email and fax number.	The National Aluminium Company Limited Nalco Bhawan,P/1, Nayapalli, Bhubaneswar, Odisha- 751061, Phone: 0674-2301988, 2301999. Fax: 0674-2300521/2300580
10.	Village	Panchpatmali
11.	Taluka/Mandal	Koraput
12.	District	Koraput
13.	Pincode	763008
14.	State	Odisha
15.	Post office.	Damanjodi
16.	Nearest police station	Kakiriguma
17.	Nearest Railway station	Damanjodi
18.	Date of Grant of Mining Lease	20.07.1979
19.	Date of Execution	20.07.1979
20.	Date of opening of Mine	22.05.2017
21.	Date of expiry	N.A.(Lease extended upto19.07.2029)
22.	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Mr. Pankaj Kumar Sharma, Director (Production) Nalco Bhawan, Corporate Office. P/1, Nayapali, Bhubaneswar-751061. Phone: 0674-2301988, 2301999 E-mail : dirprod@nalcoindia.co.in Fax : 0674-2300521/2300580 Date of Appointment : 01.02.2023
23.	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Mr. VSS Anand, Group General Manager (Mines) Panchpatmali Bauxite Mine, M & R Complex, PO: Damanjodi – 763008, Dist: Koraput (Odisha). Ph: (06853)268001 E mail: gm_mines@nalcoindia.co.in Fax: (06853) 268002, 268003 Date of appointment: 22.02.2024,
24.	Name of the Mines Manager with Address, mobile no, email, fax number and date of appointment in mine	Mr. Rajesh J. Vinchurkar, Panchpatmali Bauxite mines, South Block. M: 9437495139 Date of Appointment :01/05/2021

25.	Name of the Mining Engineer , Qualification and total experience with Address, mobile no, email, fax/phone number and date of appointment in mine	Mr. Rishikesh Bahadur Singh, B.E.(Mining) Experience:24yrs M : 9437577241 Date of appointment: 14/11/2022
26.	Name of the Geologist , Qualification and total experience with Address, mobile no, email, fax number and date of appointment in mine	Mr. P T Sahoo, M.Sc.(Geology) Experience: 10yrs Date of appointment: 03/05/2021 M : 9438689098
27.	Date of Approval of Mining Plan/Review of Mining Plan/ their modifications with five-year period and specific condition in approval letter, if any.	<ol style="list-style-type: none"> 1. Mining plan vide letter no. 314(3)/2009-MCCM(CZ)/mp-35 dated 24/05/2010 2. Scheme of Mining vide letter no. MS/FM/58-ORI/BHU/2014-15/1717 dated 27/08/2015. 3. Modification of RMP vide letter no. MSM/FM/14-ORI/BHU/2016-17 dated 05/01/2017. 4. RMP vide letter no. MS/FM/30-ORI/BHU/2018-19 dated 14/11/2018 5. Mod. Of RMP vide letter no. MRMP/A/490ORI/BHU/2020-21 dated 03/03/2021.
28.	Mineral (s) granted in lease and proved for mining.	Bauxite
29.	Method of Mining (Opencast, Underground)	Opencast
30.	Category (Fully Mechanised, Others or Manual)	Mechanized
31.	Captive/Non-Captive	Captive
32.	Present EC Capacity	3.15 Million Tonnes

1.Exploration: (FY 2023-24)

S.N.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NIL	NIL	Area Fully Explored under G1
1b	Exploration over lease area for Geological axis 1 or 2.	NIL	NIL	Area Fully Explored under G1 & G2. G1 Area: 326.54 Ha
1c	Exploration Agency & 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	NIL	NIL	Area Fully Explored under G1 & G2. G1 Area: 326.54 Ha

1e	Balance reserves as on 31.03.2024 (Proved + Probable)	As on 31.12.2020 111-80.462 million tonnes 211-9.611 million tonnes, as per last approved mining plan.	Proved Mineral reserve (111)- 766,99,350 T Feasible Mineral Resource (211)- 93,84,450 T	NIL
1f	General remarks of inspecting officer on geology, exploration etc.	Entire potential mineralized area has been explored under G1 level of exploration.		

2.Development: (FY 2023-24)

S.N.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	(Northern part) 708958 E - 709348 E 2080372N - 2080823 N Southern Part 2079037-2079393N 708334-708756E	(Northern part) 708958 E - 709348 E 2080372N - 2080823 N	Broadly within the Proposed location.
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Separate benches in overburden and minerals	Separate benches in overburden and minerals	NIL
2c	Stripping ratio or ore to OB ratio	1:0.10	1:0.07	NIL
2d	Quantity of topsoil generation in m ³	Nil	Nil	NIL
2e	Quantity of overburden generation in m ³	3,01,300	75,030	Violation issued under Rule 11(1) of MCDR, 2017
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Less development has been carried out for which lesser quantity of overburden has been generated. Violation issued under Rule 11(1) of MCDR, 2017		

3.Exploitation: (FY 2023-24)

S.N.	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	02	01	Violation issued under Rule 11(1) of MCDR, 2017 for less production/development.
3b	Quantity of ROM mineral production proposed	31,50,000 Tonnes	11,50,150 Tonnes	Violation issued under Rule 11(1) of MCDR, 2017
3c	Recovery of salable /usable mineral from ROM production	100% recovery 31,50,000 Tonnes	100% recovery 11,50,100 Tonnes	NIL
3d	Quantity of mineral reject generation	NIL	NIL	No Mineral Reject generation
3e	Grade of mineral reject generation and threshold value declared	NIL	NIL	No Mineral Reject generation
3f	Quantity of sub-grade mineral	NIL	NIL	No Sub-grade Mineral
3g	Grade of sub-grade mineral generation	NIL	NIL	No Sub-grade Mineral
3h	Manual / Mechanized method adopted for segregating from	Mechanized	Mechanized	NIL
3i	Any analysis or beneficiation study proposed & carried out for sub-grade	NIL	NIL	NIL
3j	Provision of drilling & blasting in mineral benches	Blasting is proposed as per requirement	Bauxite are loosened by the help of ripper dozers	Blasting is not carried out
3k	Provision of mining machineries in mineral benches	Ripper dozer, Shovel, Loader & Dumper is proposed for excavation and hauling.	Ripper dozer, Shovel, Loader & Dumper is deployed for excavation and hauling.	NIL
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in	Aluminous Laterite 2.0 mtrs & Bauxite 8.0 mtrs	Maintained, as per proposal	NIL
3m	Total area covered under excavation/pits	63.921 ha at the end of plan period i.e. year 2023-24.	29.54 ha	Less Bauxite production Hence, area covered under excavation is less.

3n	Ore to OB ratio for the pit/mine during the year	1:0.10	1:0.07	NIL
3o	Total area put in use under different heads at the end of year	139.165 ha at the end of the plan period i.e. year 2023-24	(i) Covered under current (O/C) Working – 29.54 ha (ii) Reclaimed/ Rehabilitated- 4.35 ha (iii) Occupied by plant, buildings, residential, welfare buildings & roads- 62.22 ha (iv) Work done under PMCP during the year- 1.25 ha	NIL
3p	Production of ROM mineral during the last five year period as applicable.	2019-20: 1000800 T 2020-21: 1000100 T 2021-22: 2000500 T	2019-20: 456900 T 2020-21: 804450 T 2021-22: 1035600 T 2022-23: 1050450 T 2023-24: 1150150 T	NIL
3q	General remarks of inspecting officer on method of mining	Proposed production has not been carried out, violation issued under rule 11(1) of MCDR-2017. Less development has been carried out due to less production.		

4.Solid Waste Management-Dumping: (FY 2023-24)

S.N.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Separate dumping of OB proposed in southern part.	At area-1 (Northern part), OB is being used for concurrent backfilling. Top soil is being used for plantation in backfilled area.	No dumping work at southern part, due to no development work carried out in area-2 Southern part.
4b	Location of topsoil, OB & mineral reject dumps	Temporary OB Dump at Area-2. 708300 E 2078800 N	NIL	Due to no development work carried out in area-2 Southern part.
4c	Number of dumps within lease area and outside lease area	Within lease area – 01 Outside lease area- 0	NIL	Due to no development work carried out in area-2 Southern part.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Temporary dump within the ultimate pit limit.	NIL	Due to no development work carried out in area-2 Southern part.
4e	Number of active & alive dumps	01	01	NIL
4f	Number of dead dumps	NIL	NIL	
4g	Number of dumps stabilized	NIL	NIL	01 Temp OB Dump will be rehandled for backfilling at Area-1.

4h	Whether Retaining wall or garland drain all along dumps are there	YES	YES	281m retaining wall along the dump at Area-1.
4i	Length of Retaining wall or garland drain all along dump	NIL	NIL	281m retaining wall is already constructed along the dump at Area-1.
4j	Number of settling ponds	NIL	NIL	NA
4k	Specific comments of inspecting officer on waste dump	Overburden is being used for concurrent backfilling. No development work has been carried out at southern part for which no dumping work has been carried out.		

5.Solid Waste Management-Backfilling: (FY 2023-24)

S.N.	Item	Proposals	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	100% extraction of Bauxite before backfilling	As per proposal	NIL
5b	Area under backfilling of mined out area	2.29 ha	2.21 ha	NIL
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	Yes	Being practiced	NIL
5d	Total area fully reclaimed & rehabilitated	No Proposal	NIL	NIL
5e	General remarks of inspecting officer on backfilling, reclamation etc	Very less quantity of top soil generated, which is using for plantation purpose and concurrent backfilling work has been carried out.		

6.Progressive Mine Closure Plan: (FY 2023-24)

S.N.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2). (Hard copy same provided)	Annual report on PMCP to be submitted before 1 st July	Submitted on 24.06.2024	NIL
6b	Management of worked/mined out benches i) Area available for rehabilitation (ha) ii) Afforestation done (ha) iii) No. of saplings planted	i) 2.29 ii) 2.29	1.25 1.25	Some of the backfilling area is being prepared for Miyawaki Planation.

	<p>during the year</p> <p>iv) Cumulative no. of plants</p> <p>v) Any other specific method of rehabilitation</p> <p>vi) Cost incurred on watch & care during the year</p>	<p>iii) 3,667</p> <p>iv) NA</p> <p>v) NA</p> <p>vi) No such estimated cost is proposed</p>	<p>5,000</p> <p>6,45,354</p> <p>NA</p> <p>Rs. 14,81,000.00</p>	<p>Total Plantation: 45,004</p> <p>Backfilled area:5,000</p> <p>Plantation over Access road, hill slope & Safety zone: 40,004</p> <p>Miyawaki Planation.</p>
6c	<p>Compliance on reclamation and rehabilitation by backfilling</p> <p>i) Voids available for backfilling (L X B X D)</p> <p>ii) Void filled by waste/tailings</p> <p>iii) Afforestation on the backfilled area</p> <p>iv) Rehabilitation by making water reservoir</p> <p>v) Any other specific means</p>	<p>i) 2.29 ha proposed for reclamation by backfilling</p> <p>ii) No proposal</p> <p>iii) Yes</p> <p>iv) No such proposal</p> <p>v) No such proposal</p>	<p>2.21 ha backfilling carried out.</p> <p>1.25 ha reclamation is done.</p> <p>Plantation done on backfilled area of 1.25 ha</p> <p>NIL</p> <p>NIL</p>	<p>As per requirement, the Bauxite production is less, hence OB removal is less than the proposal</p> <p>Some of the backfilling area is being prepared for Miyawaki Planation.</p>
6d	<p>Compliance of Rehabilitation of waste land within lease</p> <p>i) Afforestation</p> <p>ii) Area rehabilitated (ha)</p> <p>iii) Method of rehabilitation</p>	<p>Not Applicable</p>	<p>NIL</p>	<p>NIL</p>
6e	<p>Compliance of Environmental monitoring (core zone & buffer zone)</p>	<p>Air monitoring stations-05 No</p> <p>Stream monitoring- 17 locations</p> <p>Ground water monitoring- 15 locations</p> <p>Noise-5 locations</p>	<p>Air monitoring stations-05 No</p> <p>Stream monitoring- 17 locations</p> <p>Ground water monitoring- 15 locations</p> <p>Noise-5 locations</p>	<p>NIL</p>
6f	<p>General remarks of inspecting Officer on PMCP compliance & progressive closure operation etc</p>	<p>2.21ha area is back filled and1.25ha area is fully rehabilitated. Some of the backfilling area is being prepared for Miyawaki Planation.</p>		

7.Mineral Conservation: (FY 2023-24)

S.N.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Sorting within lease hold area	Sorting within lease hold area	NIL
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Mechanical	NIL
7c	Different grade of mineral sorted out at mines	Not Applicable	NIL	
7d	Any beneficiation process at mines	Not Applicable	NIL	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	+20% Al ₂ O ₃ and -7% SiO ₂ have been considered as the cutoff grade of bauxite for the ML area.		

8.Environment: (FY 2023-24)

S.N.	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Separate removal and utilization of topsoil is proposed.	Top soil is stacked separately and being used for plantation.	Top soil is stacked separately and being used for plantation.
8b	Concurrent use or storage of topsoil	Yes	Concurrent use or storage of topsoil being practiced.	A very thin layer of top soil mixed with lateritic boulder is present as patches within the leasehold area. This top soil will be scrapped by the wheel loaders and transported by dumpers to the
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Temporary dumping of OB and stacking of Top soil proposed at Area-2 (Southern part)	NIL	As there is no development work due to delay in area-2 (Southern part).
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Concurrent backfilling is proposed.	Concurrent backfilling is being practiced.	NIL
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Phased restoration, reclamation and rehabilitation of lands affected by mining	Being practiced	NIL

8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	No vegetation existed initially.	Progressive Plantation is carried out with a cumulative sapling of 645354 no.	NIL
8g	Survival rate	70-80%	70-80%	NIL
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haul roads for dust suppression is proposed	Being practiced	NIL
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	A very thin layer of top soil mixed with lateritic boulder is present as patches within the leasehold area. This top soil will be scrapped by the wheel loaders and transported by dumpers to the mined-out area for concurrent use for plantation.		

9.Compliance of Rule 45 (FY 2023-24)

S.N.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly and annual returns are to be submitted as rule 45 of MCDR,2017	Monthly Return – submitted before 9 th of every month & Annual Return for FY 2023-24 submitted on 24.06.2024.	NIL
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manager- Sh. R. J. Vinchurkar, Mining Engineer: Sh. R. B. Singh, Geologist: Sh. P. T. Sahoo.	Actual also the same.	NIL
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	(i) Covered under current (O/C) Working – 29.54 ha (ii) Reclaimed/ Rehabilitated- 4.35 ha (iii) Occupied by plant, buildings, residential, welfare buildings & roads- 62.22 ha (iv) Work done under PMCP during the year- 1.25 ha	Broadly, actual also as per AR.	NIL

9d	Scrutiny of Annual return on Afforestation	5,000no Planted	Actual also as per AR	Total Plantation: 45,004 Backfilled area:5,000 Plantation over Access road, hill slope &
9e	Scrutiny of Annual return on mineral reject generation (Grade &	NIL	No Mineral Reject generated	NIL
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing stock 138016.953 T Grade: 40% to 45% Al2O3	Appear to be correct at that time.	NIL
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost etc.	Cost of production Rs.955.40	Appear to be correct	NIL
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets(Rs):407437290 (In respect of Plant ,Mine machinery, work-shop, Buildings, Power& water Installation)	Appear to be correct	NIL
9i	Scrutiny of Annual return on mining machineries	Back Hoe-03 Nos, Dumper-04 Nos, Tipper-12 Nos, Front End Loader-02 Nos Dozer-02 Nos	Observed to be correct.	NIL

1. The lessee has submitted DAI/drone survey data under rule 34A for FY 2023-24 on 22.06.2024.
2. During current inspection: The violation of Rules 11(1) of MCDR 2017 have been observed and the violation letter issued on 09/10/2024.

Rohita Sethi
Assistant Controller of Mines