

**INDIAN BUREAU OF MINES**  
**MCDR INSPECTION REPORT**  
**Bhubaneswar Region**

**General**

SL. No.	Particulars	Details
1.	Name of the Mine	Panchpatmali(Central & North)Bauxite Mine
2.	Date of Inspection	03.10.2024
3.	Name of Inspection officer:	Shri Rohita Sethi, Assistant Controller of Mines
4.	Name of official accompanying inspection	Sh. Ajaya Choudhury, Mine Manager Sh. Bikash Chandra Mohanty, Mining Engineer Sh. Chandan Kumar Behera, Geologist
5.	Last date of Inspection & Officer	02.11.2023 & R.K. Das, Deputy Controller of Mines, IBM, Bhubaneswar
6.	Total Lease Area (Ha) with breakup of non-forest and forest land	1315.264 (Forest: 1294.283 Ha, NonForest: 20.981 Ha)
7.	Minecode	07ORI09001
8.	IBM Registration Number under rule 45 of MCDR, 2017	IBM/116/2011
9.	Name of the lessee, Address, phone, email and fax number.	M/s National Aluminium Company Ltd. NALCO Bhawan, P/1 Nayapalli, Bhubaneswar, Odisha- 751061, Phone: 0674-2301988, 2301999. Fax: 0674-2300521/2300580
10.	Village	Bhejaput
11.	Taluka/Mandal	Damanjodi
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	17/11/1982
19.	Date of Execution	17/11/1982
20.	Date of opening of Mine	29/11/1984
21.	Date of expiry	Valid up to 16.11.2032

22.	Name of the <b>Nominated Owner</b> with Address, phone, email, fax number and date of appointment	Mr. Pankaj Kumar Sharma, Director (Production), M/s NALCO NALCO Bhawan, Corporate Office, P/1, Nayapali, Bhubaneswar-751 061, Dist: Khurda (Odisha). Ph: (0674) 2300660 E mail: dirprod@nalcoindia.co.in Fax: 0674 2301608 Date of Appointment: 01.02.2023
23.	Name of the <b>Mine Agent</b> with Address, phone, email, fax number and date of appointment	Mr.Vedula Surendra Sai Anand, GGM (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, under MMR - 1961.
24.	Name of the <b>Mines Manager</b> with Address, mobile no, email, fax number and date of appointment in mine	Mr. Ajaya Choudhury, BE (Mining), GM (Mines), Panchpatmali Bauxite Mine(Central & North Block) PO: Damanjodi – 763008, Dist: Koraput (Odisha). Ph no: 09437035130 E mail: <a href="mailto:ajaya.choudhury@nalcoindia.co.in">ajaya.choudhury@nalcoindia.co.in</a> Date of Appointment in Mine: 01.05.2021
25.	Name of the <b>Mining Engineer</b> , Qualification and total experience with Address, mobile no, email, fax/phone number and date of appointment in mine	Mr. Bikash Chandra Mohanty, BE (Mining), AGM (Mining), Experience: 16 Years Panchpatmali Bauxite Mine(Central & North Block) PO: Damanjodi – 763008, Dist: Koraput (Odisha). Ph no: 9437201468 E mail: <a href="mailto:bikash.mohanty@nalcoindia.co.in">bikash.mohanty@nalcoindia.co.in</a> Date of Appointment in Mine: 08.05.2021
26.	Name of the <b>Geologist</b> , Qualification and total experience with Address, mobile no, email, fax number and date of appointment in mine	Mr. Chandan Kumar Behera, M.Tech(Geological Technology), Manager (Geology), Experience: 10 Years Panchpatmali Bauxite Mine(Central & North Block) PO: Damanjodi – 763008, Dist: Koraput (Odisha). Ph no: 09937463875 E mail: <a href="mailto:chandan.behera@nalcoindia.co.in">chandan.behera@nalcoindia.co.in</a> Date of Appointment in Mine:08.05.2021
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.	1.Letter No.314(3)/91-MCCM(C)/MP-31,Dt:07/05/1993 Review of Mining Plan,FY-01/04/1993 to 31/03/1998. 2.Letter No.314(3)/98-MCCM(C)/MP/S-20, Dt:21/01/2000, Review of Mining Plan,FY-01/04/1998 to 31/03/2003. 3.Letter No. 314(3)/2003-MCCM(C)/ MP/S-15, Dt:22/06/2004, Review of Mining Plan,FY-01/04/2003 to 31/03/2008. 4. Letter No. 314(3)/03-PMCP/CZ/MP-15, Dt:03/12/2004, Review of Mining Plan for Inclusion of PMCP,FY 03/12/2004 to 31/03/2008 5. Letter No.314(3)/2008-MCCM(CZ)/MS-09/1660, Dt:30/12/2008, Review of Mining plan, FY:01/04/2008 to 31/03/2013. 6. Letter No.314(3)/2011-MCCM(CZ)/MP-40 Dt:10/07/2012, Review of Mining Plan, FY:

		01/04/2012 to 31/03/2017.  7.Letter No: MPM/FM/07-ORI/BHU/2014-15, Dt:01/05/2015 ,Modification of Mining Plan , FY:01/05/2015 to 31/03/2017. 8. Letter No: MS/FM/10-ORI/BHU/2016-17, Dt:11/11/2016, Review of Mining Plan,FY:01/04/2017 to 31/03/2022. 9.Letter No:MRMP/A/13-ORIBHU/2019-20/1395 Dt: 25/10/2019,Modification of Mining Plan, FY:25/10/2019 to 31/03/2022. 10.Letter No; RMP/A/22-ORI/BHU/2020-21/1198 Dt:09/11/2021,Review of Mining Plan,FY:01/04/2022 to 31/03/2027. 11. MCDR-MiFLOBXT/7/2023-BBS-IBM_RO_BBS DT:17.01.2024,Modification of Review of Mining Plan, FY- 01/04/2023 to 31/03/2027.
28.	Mineral (s) granted in lease and proved for mining.	Bauxite
29.	Method of Mining (Opencast, Underground)	Opencast
30.	Category (Fully Mechanized, Others or Manual)	Fully Mechanized
31.	Captive/Non-Captive	Captive
32.	Present EC Capacity	6.825MTPA

**1.Exploration:**

SL.No	Item	Proposals (FY 2023-24)	Actual work	Remarks
1a	Backlog of previous year	NIL	NA	
1b	Exploration over lease area for Geological axis 1 or 2.	G1 level:1075.722 ha & Un-explored area:239.542 ha	G1 level:1075.722 ha & Un-explored area:239.542 ha	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NIL	NIL	
1d	Balance area to be explored to bring Geological axis in 1 or	NIL	NIL	

	2			
1e	Balance reserves as on 01.04.2024. (Proved + Probable)	As on 31/03/2023 Mineable Reserve (111)- 82120600 tonnes Blocked Resource- 12174400 tonnes	Mineable Reserve (111)- 75.72 Mill. Tonnes Blocked Resource (211)- 12.17 Mill. Tonnes	
1f	General remarks of inspecting officer on geology, exploration etc.	No exploration proposal for the year 2023-24		

## 2.Development:

SL.N o.	Item	Proposals (FY 2023-24)	Actual work	Remarks
2a	Location of development w.r.t. lease area	<b>1.North Pit:</b> 715864.43 E to 7165028510 E, 2091113.899N to 2091915.815N. <b>2. CB2 (old):</b> 710062 E to 710583 E, 2082229 N to 2082592 N <b>3. CB2(new):</b> 710876E to 711211E, 2082796 N to 2083075 N	<b>1.North Pit:</b> 715914.419 E to 716480.036 E, 2091181.189N to 2091915.815N. <b>2. CB2 (old):</b> 710064 E to 710186 E, 2082234 N to 2082484 N <b>3. CB2(new):</b> 710876E to 711211E, 2082796 N to 2083075 N	
2b	Separate benches in topsoil, overburden and mineral	Top Soil: 0 bench Laterite: 1 bench Bauxite: 2 benches (8 mtrs and 6 mtrs height)	Top Soil: 0 bench Laterite: 1 bench Bauxite: 2 benches (8 mtrs and 6 mtrs height)	The topsoil is being scraped separately. Separate benches for overburden & bauxite made.
2c	Stripping ratio or Ore to OB ratio	1:0.12	1:0.06	NIL
2d	Quantity of topsoil generation in m3	40,000 m3	85,965 m3	. NIL
2e	Quantity of overburden generation in m3	4,00,000 m3 (Including 40,000 CuM Top soil)	4,00,357.50 m3 (Including 85,965 CuM Top soil)	NIL
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Development has been carried out as per the proposal.		

**3.Exploitation:**

SL. No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
3a	Number of pits proposed for production	03	03	
3b	Quantity of ROM mineral production proposed	68,25,000MT	63,97,571MT	
3c	Recovery of salable/usable mineral from ROM production	100%	100%	
3d	Quantity of mineral reject generation	NIL	NIL	
3e	Grade of mineral reject generation and threshold value declared	NIL	NIL	No Mineral Reject
3f	Quantity of sub-grade mineral generation	NIL	NIL	
3g	Grade of sub-grade mineral generation	NIL	NIL	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised Method	Mechanised Method	
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	No Proposal	NIL	
3j	Provision of	Deep hole	Drilling and	

	drilling & blasting in mineral benches	drilling & blasting is proposed	Blasting is done in Top bauxite bench as per requirement	
3k	Provision of mining machineries in mineral benches	Blast hole drill, Ripper dozer, Wheel Loader, Backhoe Shovel, Dumper, Water Sprinkler	Blast hole drill, Ripper dozer, Wheel Loader, Backhoe Shovel, Dumper, Water Sprinkler	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes Overburden: 2 m Bauxite: 8 m	Yes Overburden: 2 m Bauxite: 8 m	
3m	Total area covered under excavation/pits	24.07 ha	21.84 ha	
3n	Ore to OB ratio for the pit/mine during the year	1:0.12	1: 0.06	
3o	Total area put in use under different heads at the end of year	1.Area under Excavation-625 ha 2.Overburden dump-5.29 ha 3.Infrastructure-102.56 ha 4.Mineral Storage-1.31 ha	1.Area under Excavation-622.77 ha 2.Overburden dump-3.57ha 3.Infrastructure-102.56 ha 4.Mineral Storage-1.31 ha	
3p	Production of ROM mineral during <b>last five-years period</b> , as applicable	2019-20: 6825000 MT 2020-21: 6825000 MT 2021-22: 6825000 MT 2022-23: 6825000 MT 2023-24: 6825000 MT	2019-20:67,29,579 MT 2020-21: 65,79,835M T 2021-22: 64,14,906 MT 2022-23: 64,51,688 MT 2023-24: 63,97,571MT	
3q	General remarks of inspecting	Open-cast fully mechanized mining method with Backhoe Dumper combination, with 02m and 08m height		

Officer on method of mining etc	benches in respect of OB and ROM and deep drilling and blasting is being carried out.
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#### 4.Solid Waste Management-Dumping:

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Temporary OB Dump- 01 Nos.	NIL	As the OB & waste generated was backfilled in the mined-out area.
4b	Location of topsoil, OB & mineral reject dumps	711502.35 E 2083096.815N	Concurrent backfilling carried out as per proposal	As the OB & waste generated was backfilled in the mined-out area
4c	Number of dumps within lease area and outside lease area	02	No proposal for dumping	No Active Dumps inside or outside the lease area.
4d	Location of dumps w.r.t. ultimate pit limit	Not Applicable	Not Applicable	
4e	Number of active & alive dumps	Nil	Nil	The OB & waste generated during mining was backfilled in the mined out area
4f	Number of dead dumps	Nil	Not Applicable	
4g	Number of dumps stabilised	NIL	NIL	02 no of dumps of 3.57ha are stabilized
4h	Whether Retaining wall or garland drain all along dumps are there	135 mtr	135 mtr	
4i	Length of Retaining wall or garland drain all along dump	Nil	Not Applicable	
4j	Number of settling ponds	Nil	Not Applicable	
4k	Specific Comments of inspecting Officer on wastedump management	Waste generated during the mining operation was backfilled in the mined-out area as per proposal.		

#### 5.Solid Waste Management-Backfilling:

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
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5a	Status on part or full extraction of mineral from mined out area before starting backfilling	100% extraction of Bauxite before backfilling	100% extraction of Bauxite before backfilling	
5b	Area under backfilling of mined out area	16.28 ha	16.30ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area	Yes	Being Practiced	Top Soil layer was very thin and scanty. During actual mining, more topsoil was found and excavated.
5d	Total area fully reclaimed & rehabilitated	13.50 ha	13.53 ha	
5e	General remarks of inspecting Officer on backfilling and reclamation etc	Backfilling has been carried out as per proposal		

### 6. Progressive Mine Closure Plan: ---

SL. N.	Item	Proposals (FY 2023-24)	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2). (Hard copy same provided)	By 1 <sup>st</sup> July 2024	24.06.2024	
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	i)13.50 ha ii)13.50 ha iii) 33,750 iv) 20,34,738 v) Afforestation vi) Nil	i)13.53ha ii)13.53 ha iii)39,900 iv) 20,34,738 v)Afforestation vi) 27.55 Lakhs	Only on Backfilling Area
6c	Compliance on reclamation and rehabilitation by	i)16.28 ha ii) <b>North Block:</b> 2091049.24	i)16.30 ha ii) <b>North Block:</b> 2091049.9	

	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	4N- 2091566.22 N, 715977.16E - 716469.384 E <b>CB-2:</b> 2082128.13 7N- 2082462.00 N, 710161.909 E- 710433.079 E  iii) Yes iv) 0.6 Ha v) NA	46N- 2091570.8 95N, 715977.97 8E- 716465.17 E <b>CB-2:</b> 2082120.1 72N- 2082463.4 48N, 710161.58 3 E- 710433.57 6 E iii) Yes iv) 0.6 ha v) NA	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	33750 number of plants over backfilled area 13.5ha.	71355 number of plants over 13.53ha.	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Air monitoring- 10 stations Stream monitoring- 17 locations Ground water monitoring- 15 locations Noise -10 locations	Air monitoring- 10 stations Stream monitoring- 17 locations Ground water monitoring- 15 locations Noise -10 locations	
6f	General remarks of inspecting Officer on PMCP compliance & progressive closure operation etc	Adequate plantation has been carried over the backfilled area.		

### 7. Mineral Conservation:

SL.N o.	Item	Proposals ((FY 2023-24)	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Sorting within lease hold area	Sorting within lease hold area	Captive Use

7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanical	Mechanical	
7c	Different grade of mineral sorted out at mines	+20% Al <sub>2</sub> O <sub>3</sub> and -7% SiO <sub>2</sub>	+20% Al <sub>2</sub> O <sub>3</sub> and -7% SiO <sub>2</sub>	
7d	Any beneficiation process at mines	NA	NA	

### 8.Environment:

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
8a	Separate removal and utilization of topsoil	Topsoil and spreading the same over the backfilled area was proposed	Topsoil used for plantation over the backfilled area.	Used in backfilled area for plantation.
8b	Concurrent use or storage of topsoil	Yes	Yes being practiced.	No storage
8c	Separate dumps for overburden, waste rock, rejects and fines	NIL	NIL	Not Applicable
8d	Use of overburden, waste rock, rejects and fines dump for restoring the land to its original use	Concurrent backfilling work	Concurrent backfilling work has been carried out.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Concurrent backfilling of mined out area was proposed.	Concurrent backfilling of mined out area is being practiced.	
8f	Baseline information on existence of plantation & additional plantation done	33750 number of plants over backfilled area 13.5ha.	71355 number of plants over backfilled area 13.53ha. Cumulative: Total plantation- Within Lease: 20,34,738 Outside lease:	

			13,97,354	
8g	Survival rate	80%	82%	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haul roads for dust suppression is proposed.	Water sprinkling on haul roads for dust suppression is being practiced.	

### **9.Compliance of Rule 45 (2023-24)**

<b>S.N.</b>	<b>Item</b>	<b>Proposals</b>	<b>Actual work</b>	<b>Remark</b>
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 <sup>th</sup> of every month & Annual Return for FY 2023-24 submitted on	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manager- Sh. Ajaya Choudhury Mining Engineer- Sh. Bikash Chandra Mohanty Geologist- Sh. Chandan Kumar	Mines Manager- Sh. Ajaya Choudhury Mining Engineer- Sh. Bikash Chandra Mohanty Geologist- Sh. Chandan Kumar	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current Working: 622.77 ha Reclaimed/ Rehabilitated: 412.20 0ha Occupied by plant, buildings, residential, welfare buildings& Roads: 102.56 ha.	Broadly as per proposal	
9d	Scrutiny of Annual return on Afforestation	Number of Trees planted during the year: Within Lease-	Appears to be correct	
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	NIL	NIL	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM Closing stock is Nil	Appears to be correct	
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost etc.	Cost of production Rs.951.54 Ex-mine price-951.54	Appears to be correct	
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets(Rs):273977542 7 (In respect of Plant, Mine machinery, work-shop, Buildings,	Appears to be correct	

9i	Scrutiny of Annual return on mining machineries	Back Hoe-08 Nos, Dumper-27 Nos, Tipper-12 Nos, Front End Loader-10 Nos Dozer-08 Nos Rock Breaker-02 Nos Blast Hole Drill-02 Nos Water Tanker-05 Nos Motor Grader-02 Nos	Broadly as per the proposal	
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The lessee has submitted DAI/drone survey data under rule 34A for FY 2023-24 on **22.06.2024**

RohitaSethi  
Assistant Controller of Mines