

ADITYA BIRLA



Ref: UAIL-Mines/BBM/079/2026

21st September 2026

To

The Member secretary
State Pollution Control Board, Odisha
Parivesh Bhawan, A/118
Nilakanthanagar, unit- VIII
Bhubaneswar- 751012

Subject: Submission of Environment Statement for the financial year ending **31st March 2026** with respect to Baphalimali Bauxite Mine of M/s Utkal Alumina International Ltd.

Ref : Consent to Operate (**order no. 2765**) vide letter no. **3859/IND-I-CON-5450** dated 25.02.2025 and authorization no. **IND-IV-HW-1035/2597** dated 27.02.2024

Dear Sir,

With reference to above subject and under the provision of Rule 14 of the Environment (Protection) Act, 1986 & Rules made thereof. We are submitting herewith the **Environmental Statement (FORM-V)** for the financial year ending 31st March 2026 with respect to **Baphalimali Bauxite Mine of M/s Utkal Alumina International Ltd. Paikkuphakhal, Maikanch, Rayagada, Odisha.**

This is for your kind information and necessary records please.

Thanking you,

Yours faithfully,
For Utkal Alumina International Ltd.

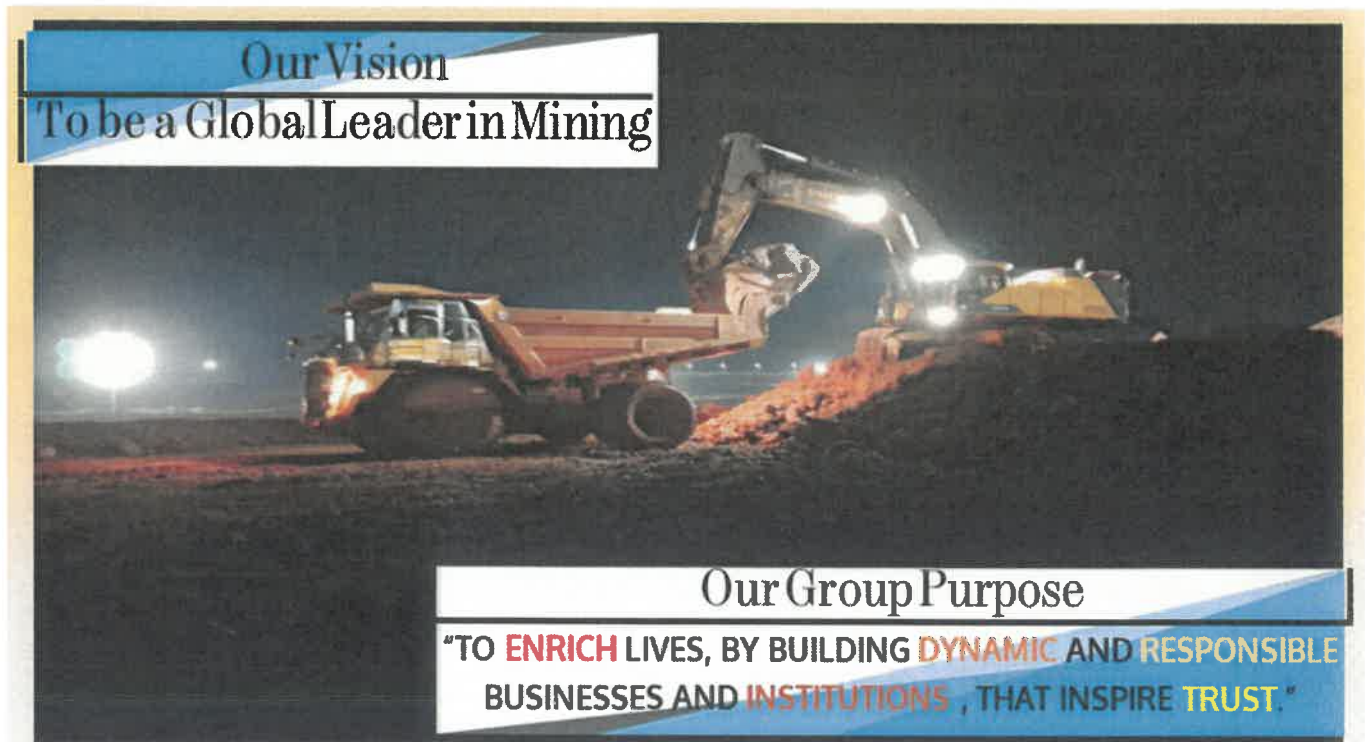
Vijay Kumar Singh Chauhan
Head- Mines
Baphlimali Bauxite Mine

Encl: As above.

Copy to: Regional Officer, SPCB, Rayagada for kind information & record.

Utkal Alumina International Limited

ENVIRONMENT STATEMENT FOR THE YEAR 2026



8.50 MTPA BAUXITE PRODUCTION

BAPHLIMALI BAUXITE MINE
M/s UTKAL ALUMINA INTERNATIONAL LTD
AT
DORAGUDA, RAYAGADA, ODISHA

FORM-V
(See rule 14)

**Environmental Statement for the Financial Year Ending 31st March 2026, of
Baphalimali Bauxite Mines of M/s. Utkal Alumina International Ltd.**

PART-A

- (i) Name and address of the owner/
Occupier of the industry operation : Mr. S K Mishra
: Baphalimali Bauxite Mine
Utkal Alumina International Ltd.
At- Doraguda, Po- Kucheipadar
Dist. Rayagada- 765015
- (ii) Industry category : Primary (Large/Red)
- (iii) Production capacity : 8.50 MPTA (Bauxite Ore)
- (iv) Year of establishment : 2012
- (v) Date of the last environmental statement submitted.: 26.09.2025

PART-B

WATER AND RAW MATERIAL CONSUMPTION

(1) Water Consumption in m3/Day

- Process : As the operation is mining of bauxite by open
cast method with shallow depth, therefore water
is not required for processing.
- Industrial (Dust Suppression & others) : 272 m3/Day
- Domestic & others : 224 m3/Day

Name of products	Process water consumption per unit of product output	
	During the previous financial year (2024-25)	During the current financial year (2025-26)
	(1)	(2)
Bauxite Ore*	Nil	Nil

* Bauxite is a natural product. As such no water is required for processing.

(2) Raw material consumption

Not applicable, as it is a raw material (Bauxite Ore) generating unit for its parent concern Utkal Alumina International Limited.

Name of Raw Materials	Name of the Product	Consumption of raw material per unit of output	
		During the previous financial year (2024-25)	During the current financial year (2025-26)
Not Applicable	Bauxite*	Nil	Nil

*Since Bauxite is a natural product, it is produced by heavy duty mining machinery. As such no raw material is required in mining process.

(3) Production (in MT)

Name of Products	During Current Financial Year (2024-25)	During Current Financial Year (2025-26)
Bauxite	76,57,426 MT	79,30,450 MT

PART- C

POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT (Parameter as specified in the consent issued)

Pollutants	Quantity of Pollutants discharged (mass/day)	Concentration of Pollutants discharged. (mass/volume)	Percentage of variation from prescribed standards with reasons.
(a) Water	No Discharge	No Discharge	Not applicable since no discharge.
(b) Air		PM10($\mu\text{g}/\text{m}^3$): 44.40	Well within the NAAQS 60 $\mu\text{g}/\text{m}^3$
		PM2.5($\mu\text{g}/\text{m}^3$): 18.87	Well within the NAAQS of 40 $\mu\text{g}/\text{m}^3$

PART-D

HAZARDOUS WASTES

(As specified under Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016).

Hazardous Wastes	Total Quantity	
HAZARDOUS WASTES: Authorization No.: IND-IV-HW-1035/2597/27-02-2024		
1. Generation from Process	During the previous financial year (2024-25)	During the current financial year (2025-26)
a) Used Oil (Stream- 5.1)	: 40.38 MT	: 28.69 MT
b) Wastes/Residue Containing Oil (Stream- 3.3, 5.2, & 33.2)	: 1.60 MT	: 1.69 MT
c) Discarded barrels (Stream- 33.1)	: 2.55 MT	: 2.07 MT
d) Contaminated cotton rags (Stream- 33.2)	: 0.95 tonnes	: 0.21 tonnes
e) Oil & grease skimming residues	: Nil	: Nil
2. From Pollution Control Facilities	: Nil	: Nil

PART- E

SOLID WASTES

Solid Wastes	Total Quantity	
	During the previous financial year (2024-25)	During the current financial year (2025-26)
(a) From process (Overburden)	54,17,304 tonnes	53,15,709 tonnes
(b) From Pollution Control Facility	Nil	Nil
(c)	54,17,304 tonnes (backfilling)	53,15,709 tonnes (backfilling)
i. Quantity recycled or re-Utilized within the unit.	Nil	Nil
ii. Sold	Nil	Nil
iii. Disposed	Nil	Nil

PART - F

Please specify the characteristics (in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Characterization of Hazardous waste & Solid waste:

The used or spent oil, contaminated cotton rags, oil filters etc. from the maintenance of HEMMs and other machineries have been identified as hazardous wastes. The composition of solid waste (Overburden) mainly consists of laterite.

Disposal Practices:

a) Solid Waste:

The Topsoil and Over Burden is being systematically and scientifically backfilled over the voids of mined out area followed by plantation.

An Organic waste converter has been installed which converts the kitchen and horticulture wastes into manure with the help of bio-inoculum which used has supplemented food for plantation. Thus, reducing organic waste is going to landfill.

The OWC helped us divert 37,713 kg of waste from landfills and converted it to manure in FY2026.

b) Hazardous wastes:

The used oil generated is collected in leak proof barrels and then kept on an impervious floor under well-ventilated cover shed with oil catch pit. It is also ensured that the caps of the barrels remain intact and horizontal. During transfer of waste oil to barrels, a trough is placed underneath in order to prevent land contamination due to oil spillage. Provision of impervious pit with oil for collection of oily waste is there at the workshop premises in addition to the existing practice of collection at specified barrels.

Similarly, the used cotton wastes, oil filters generated are collected in designated impervious pits. The hazardous wastes are being dispatched to the authorised re-cyclers of SPCB/CPCB.

PART-G

Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production.

Zero Waste Mining approach, where all overburden (OB) material and topsoil generated during operations have been 100% utilized through concurrent backfilling within the mine voids. This systematic reuse of mined material eliminates the need for external waste dumps, thereby minimizing land disturbance and aligning with circular economic principles. This Zero Waste model serves as a replicable standard for sustainable mining and responsible land use management.

The Over Burden and Topsoil generated and utilized in reclamation for the last three year are as follows.

Year	Topsoil Generated (MT)	Topsoil Utilized (MT)	Topsoil Stored (MT)
2023-24	99,707	99,707	Nil
2024-25	144958	144958	Nil
2025-26	107949	107949	Nil

Year	OB Generated (MT)	OB Utilized (MT)	OB Stored (MT)
2023-24	4892203	4892203	Nil
2024-25	5417304	5417304	Nil
2025-26	5315709	5315709	Nil

As on 31.03.2026, **181.00 Ha** area has been backfilled & **123.78 Ha** has been afforested in this backfilled area.

The main pollution control measures taken at Baphlimali bauxite mines of M/S Utkal alumina international ltd are as follows:

Air pollution control measures:

- ❖ Drilling machine with in-built vacuum cyclone dust collector & equipped with water spraying system is being adopted.
- ❖ Controlled blasting with the application of NONEL is being practiced checking fly rocks and pre-wetting is practiced before charging.
- ❖ The haulage roads are being maintained, compacted periodically.
- ❖ Regular water sprinkling is being carried out by fixed type & mobile water sprinklers at sources of fugitive dust generation like loading & unloading areas, material transfer points etc. to suppress emission and distribution of dust particles.
- ❖ Dry Fog System is in place for dust suppression at crusher.
- ❖ The transportation of Bauxite ore from the mine pit to the refinery unit is being carried out through closed conveyor system to restrict the dispersion of dust. Periodic maintenance of Diesel machines is being carried out to decrease the emission level of NOx and SOx.

- ❖ Plantation is carried out in the plateau slope, safety zone, backfilled & other areas to prevent dust flow outside the lease area.
- ❖ Periodical monitoring of Air quality is being carried out by an approved external agency & is found within permissible limit.
- ❖ Three No's CAAQMS (Continuous Ambient Air Quality Monitoring Station) have been installed inside the core zone for real time monitoring of air quality parameters for effective control of air pollution.

Water pollution control measures:

- ❖ Runoff is coursed through garland drains provided with intermediate settling pits subsequently allowed to the mined-out pit where it gets recharged. The drains and settling pits are regularly de-silted and maintained.
- ❖ we have adopted zero effluents discharge mines and 146930 KL surface runoff water for groundwater recharge and augmentation of groundwater table through settling pit and pumping the water into the existing mines pit.
- ❖ Check dams are provided around the slopes of valley to arrest the sediments.
- ❖ Peripheral barrier is provided around the mine to stop the direct flow of water down to the valley.
- ❖ Domestic effluents are treated in the sewage treatment plant (STP) located at mines. Treated water is being used for vehicle gardening and horticulture activities.
- ❖ Implementation of recommendations as suggested by NIT, Rourkela for Runoff Management are complied.
- ❖ Water quality & ground water level is monitored periodically through an approved agency and is found within prescribed limit.

Sound and Vibration control measures:

- ❖ Preventive maintenance of machineries is carried out properly to control the noise level below 85 dB in the work environment.
- ❖ Installing immovable machinery on foundations and in closed rooms.
- ❖ The HEMM operators are provided with AC close cabinets which itself is acoustic in nature.
- ❖ Workers engaged in blasting, drilling & HEMM operations are provided with ear plugs/muffs.
- ❖ We have a fixed crusher plant which is underground mounted with enclosed rotors. Thus, the noise level is within the standard.

- ❖ Noise level (ambient as well as work environment) is monitored periodically through an approved external agency & is found within permissible limit.

Steps taken to minimize the adverse impacts of ground vibration and air blast.

The controlled blasting technique is adopted using delay detonators to minimize noise & vibration. Blasting vibration is being measured regularly by using Seismograph.

- ✓ Proper drilling pattern and reducing excessive burden and spacing.
- ✓ Proper charging/ initiation with required delay sequence, optimum charging as per hole depth, using low VOD and low density and Limit frequency of blasting.
- ✓ Digitization in blasting: - Blasting software like 'SHOT Plus's and Blast Design software like 'Blast IQ' is already implemented.
- ✓ Orica software is implemented for pre and post analysis of the patch for effective decision making to control Vibration and enhance blasting efficiency
- ✓ To control dust generation, we are sprinkling water on the patch before blasting.
- ✓ Decking method for the hole charging is also being implemented for controlling excess explosive charge and for even distribution of explosive throughout the charge column the helps in reducing MCPD and hence Ground vibration as well. Also, for decking we are utilizing discarded used water bottles which is contributing towards pollution control.
- ✓ Anti- static hand band is also used here is control antistatic charge generation also all the blasting helpers are also providing with Antistatic uniform.
- ✓ Temperature gun is also used in our mine for the drilled hole temperature prediction before charging so the effective measures can be taken before to Enhance safety

PART- H

Additional measures/investment proposal for environmental protection including abatement of pollution.

- ❖ Mitigation measures shall be continuing to implement for minimization of soil erosion & choking of stream.
- ❖ lose boulder check dams shall be constructed across the seasonal nallah, drainage line & semi-perennial nallah occurring along the sloppy area of the lease.
- ❖ Installation of Organic waste converter to treat organic solid waste generated from canteen.

- ❖ Sewage Treatment Plants (STPs) have been provided at mine for treatment of domestic wastewater. Treated water is being used for gardening and horticulture activities.
- ❖ **Greenbelt Development:** - The mine has done phase wise afforestation of native species within the mine lease area covering the slope area, avenue plantation, backfilled area, and safety zone. We have planted 90,496 saplings in FY 2025-26.
- ❖ Nursery has been developed with shed net arrangement to develop, preserve, and cater for the saplings during plantation period. Increase the native species to **40 from 35**.
- ❖ An ETP has been installed to treat workshop effluent with oil and grease separation mechanism. Treated water is being used for vehicle washing and dust suppression.
- ❖ Retaining wall along with Garland drains, settling tanks and check dams of appropriate size, gradient and length have been constructed around the remaining part of over burden dump to prevent runoff water and flow of sediments directly into the natural Nallah and other water bodies.
- ❖ Check dams and concrete weir are constructed around the slopes of valley to arrest silts and sediments.
- ❖ Fixed type water sprinklers of around 3.1 Km length have been provided around stockpile area & haul road.
- ❖ Two fog cannons have been deployed at strategic locations to suppress fugitive dust.
- ❖ An efficient dry fog system is installed in the fixed crusher for suppression of dust at ROM hopper and Transfer points.
- ❖ A Sustainability marvel from inception an 18.1 kms long overland conveyor to transport bauxite from Mines to Alumina Refinery.
- ❖ The whole long conveyor belt (18.1 km long) is being covered from outside to restrict the dispersion of dust. Metal hoods are also provided at transfer points in crushing and conveying systems to confine the dispersion of dust. The installation of overland conveyor system is eco-friendly method of transporting mineral in difficult topographical weather conditions, while reducing the **fugitive dust emission** and overall environmental impact including on wildlife. It helps in reduced utilization of **fossil fuel compared to the conventional tipper transport**.
- ❖ Regular water sprinkling is done on haul roads, loading & unloading areas, and material transfer points by deploying two dedicated water tankers of capacity 28 KL.
- ❖ An **Online Noise meter** has been installed, with values displayed live through the RTDAS software.
- ❖ **Real Time Ground Water levels** are now digitally display and recorded.

PART - I MISCELLANEOUS

Any other particulars in respect of environmental protection and abatement of pollution.

- ❖ An environment cell has been established for monitoring and implementation of safeguard measures for environmental parameters.
- ❖ Three No's. of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been installed and the real time AAQ data is being transmitted to OSPCB server through RT-DAS.
- ❖ Four No's IP cameras have been installed at major predictable dust prone areas of mine viz. crusher hopper, stackyard, mines operation and material transport areas and connected with SPCB server.
- ❖ Environmental information w.r.t Air, Water, Haz, Wastes & Haz. Chemical are Displayed at the main gate for public review.
- ❖ The Solar Mobile Lighting Tower of 5 KW (5 no. of High mast, each 1 KW) to replace 2.40 KW High Mast was installed. The load capacity reduces our annual consumption by **21.9 MWh**.
- ❖ Biodiversity Management: - The Baphlimali Bauxite Mines committed to protecting biodiversity and has developed BMPs in collaboration with IUCN, aiming to achieve No Net Loss by 2050. The Sustainable Mining Charter and KPIs under seven thematic areas are the other crucial steps taken by Hindalco to make its mining vertically more sustainable.
- ❖ Expenditure incurred on Environment & Pollution Control during the year 2025-26 is approx. **3096.54 lakhs**.
- ❖ **36280bKL** water harvesting through surface rainwater harvesting structure in FY 2025-26.
- ❖ **146930 KL** rainwater is pumping back to mining pit for groundwater recharge and augmentation of groundwater table.
- ❖ Total **16170 KL** of water was recycled and reused in FY 2025-26.
- ❖ In addition to the existing 100 kg/day Organic Waste Converter (OWC), a 200 kg/day Organic Waste Converter has also been installed at Baphlimali Bauxite Mine.
- ❖ Baphlimali Bauxite Mines of M/s Utkal Alumina International Ltd. has been awarded **WEMS – ISO 46001:2019 certification** by LRQA, becoming the first mine of Hindalco and the first mine in India to achieve this significant milestone.
- ❖ During the **26th MEMC Week** at Bhubaneswar, Baphlimali Bauxite Mines received the following prestigious awards:
 - 1st Prize in Afforestation
 - 2nd Prize in Reclamation and Rehabilitation
 - Overall 1st Prize in Group “A” Category Mines

- ❖ The mine has been recognized as a Legend in Afforestation and Champion in Environment & Sustainability at the 19th EXCEED Environment Award – 2025 conferred by Sustainable Development Initiatives – “Ek Kaam Desh Ke Naam”.
- ❖ Baphlimali Bauxite Mine has been selected for the **Bala Gulshan Tandon Award of Excellence – 2025 by FIMI**, recognizing outstanding performance in mining excellence.
- ❖ Baphlimali Bauxite Mine is the first bauxite mine of India to achieve the **ASI Certification**, with the final certification completed on 22nd January 2026.
- ❖ An electric vehicle (E-Vehicle) has been commissioned to facilitate eco-friendly mine site visits, supporting the company’s decarbonization and sustainability initiatives.
- ❖ Development of a Herbal Garden and Butterfly Park were completed as per the FY 2025–26 targets under the Biodiversity Management Plan.
- ❖ The “We Love Baphlimali” Project was executed successfully within the approved scope and timeline.
- ❖ RECD installation on the 125 kVA DG set was completed on 5th January in compliance with CPCB guidelines, with due intimation provided to the SPCB.

GLIMPSES OF PHOTOGRAPHS AT BAPHLIMALI BAUXITE MINES

			
Topsoil Spreading	Reclaimed Area-Backfilling with Over Burden	STP@75 KLD	ETP@15 KLD
			
Surface Runoff Rainwater Harvesting Structure	Mobile Water Tanker	Mist Cannon	Long Distance Conveyors

			
IP-Camera	CAAQMS	Online Noise Meters	Solar Mobile Lighting Tower
			
Organic Waste Converter@300 Kg/Day	Rehabilitation Area /Panorama view of plantation	Viewpoint in Reclaimed Area	Birds Niche Habitat
			
EMAP Awareness	Swachha Baphlimali Drive: Ek Tareekh Ek Ghanta Ek Saath	5-STAR RATING MINES FROM IBM	World Environment Day 2025 #GenerationtoRestoration
			
ASI Certification	ISO46001:2019 Certification	E-Bus	EV-Dumper for Pilot run

		
Life-sized Statue Covered with Artificial Grass Statue	ECO-TOURISM-EXPERIENCE NATURE	Showcasing Sustainability through Mural Art

Date: 21.09.2026
Place: Doraguda


Vijay Kuma Singh Chauhan
Head- Mines

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