

29/09/2026
Received

HIL/ENV/ALP/2026-27

29th September 2026

The Member Secretary,
Kerala State Pollution Control Board,
Pattom Palace P. O
Trivandrum 695 004

Sub: Annual Environmental Statement 2026
Ref: Integrated Consent No. PCB/HO/EKM-3/ICO-R/07/2023

Dear Madam/ Sir,

Kindly find enclosed the Annual Environmental Statement - Form V for FY ending 25-26,
enclosed herewith for Hindalco Industries Limited, Alupuram Works.

Yours Truly

Harendra Singh
Head - Alupuram Works



Encl: Form No. V duly filled-In

Copy to:

The Environmental Engineer,
Kerala State Pollution Control Board,
Regional Office- Gandhinagar
Kochi-682020

The Environmental Engineer,
Kerala State Pollution Control Board,
Environment surveillance center,
Udyogamandal P.O.
Ernakulam- 683501

Hindalco Industries Limited

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W: www.hindalco.com | E: hilinvestors@adityabirla.com | Corporate ID No.: L27020MH1958PLC011238

FORM NO. V

(See rule 14)

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING 31 MARCH 2026

Part A

Sl No	Description		
1	Name and address of the owner/occupier of the company	Harendra Singh Head- Alupuram Works Hindalco Industries Ltd., XV/1, Alupuram Works Eloor Road, Kuttikattukara Post, Ernakulam – 683501	
2	Operation process	Production of Aluminium Extruded Sections	
3	Industry Category		
	Primary (STC Code)	NA	
	Secondary (STC Code)	NA	
4	Production capacity (units)	Aluminium Extruded Sections	20000 MT Extrusions/ year
5	Year of Establishment	1943	
6	Date of last environmental statement submitted	30 September 2025	

PART B

Water and Raw Material Consumption

1. Water consumption (m³/day)

Process: Nil

Industrial Cooling: 151.7

Domestic: 120.7*

*Domestic consumption includes water supply to guest houses, colonies, canteen and includes consumption through the water taps provided for the surrounding community based on requests from local bodies/general public.



SI No	Name of the product	Process water consumption per unit of product	
		During the previous financial year	During the current financial year
1	Aluminium Extrusions (Extruded Sections)	Water is not used in the production process (Used only for industrial cooling)	Water is not used in the production process (used only for industrial cooling)

Raw Material Consumption:

Name of material	Name of products	Consumption of Raw Materials per unit of Product	
		During the financial year (2024-25)	During the financial year (2025-26)
Aluminium Primary Ingot	Aluminium Extruded Sections	.018	.0032
Aluminium scrap from Extrusion plant	"	.407	.369
Other Aluminium Process Scrap- Casting Plant	"	.101	.148
Alloying Elements	"	.008	.010
Aluminium billets from Hindalco units (Mahan & Renukoot)	"	1.027	0.872
Aluminium billets from CMR/HAAL	"	-	0.137
Furnace Oil	"	84.5 Litres / MT on Aluminium metal melted basis	78.29 Litres / MT on Aluminium metal melted basis
LPG (KG/MT)	"	0.020	0.023
HSD (LT/ MT)	"	0.002	0.0010

Industry may use code if disclosing details of raw material would violate contractual obligation otherwise all industries have to name the raw material used.



PART -C

POLLUTION DISCHARGED TO ENVIRONMENT OF OUTPUT
(Parameters as specified in the consent order issued)

Sl No	Pollutants	Quantity of pollutants discharged - mass/day (Kg/day)	Concentration of pollutants in discharges - mass/volume (mg/l)	Percentage of variations from prescribed standards with reasons.
WATER/ WASTEWATER				
OUTLET A - No effluent discharge to river				
OUTLET B				
1	pH		6.93	Individual or average values do not exceed the specified limits. Water not discharged outside during the year
2	Suspended Solids	0.00	1.88	
3	Oil & Grease	0.00	1.0	
4	BOD	0.00	2.38	
5	COD	0.00	10.15	
Treated Effluent from STP plant				
1	pH		6.44	Individual or average values do not exceed the limits specified
2	Suspended Solids	0.053	7.27	
3	Oil & Grease	0.007	1.0	
4	BOD	0.041	5.53	
5	COD	0.153	20.85	
Labor Colony STP				
1	pH		6.61	Individual or average values do not exceed the limits specified
2	Suspended Solids	0.039	2.02	
3	Oil & Grease	0.019	1.0	
4	BOD	0.046	2.38	
5	COD	0.226	8.11	
Staff Colony STP				
1	pH		6.82	Individual or average values do not exceed the limits specified
2	Suspended Solids	0.044	2.17	
3	Oil & Grease	0.02	1.0	
4	BOD	0.054	2.69	
5	COD	0.161	8.01	
Note – Treated STP Water is used for irrigation purpose.				



Plant ETP:

S No.	Pollutants	Concentration of pollutants in mg/l	Individual or average values do not exceed the limits specified.
1	pH	7.62	
2	Suspended Solids	18	
3	Oil & Grease	1.0	
4	BOD	2.5	
5	COD	8.24	
6	TDS	1795	
Note: Wastewater generation was minimal during the reporting period owing to fewer powder coating activities.			

AIR EMISSION

Pollutants	Quantity of Pollutants discharged mass/day Kg/d	Concentration of pollutants in discharges mass/volume mg/Nm3	Percentage of variations from prescribed standards with reasons.
SUSPENDED PARTICULATE MATTER			
Casting Plant	2.26	28.46	Individual or average values do not exceed the limits specified
SULPHUR DIOXIDE			
Casting Plant	0.16	2	Individual or average values do not exceed the limits specified

SUSPENDED PARTICULATE MATTER

Extrusion Plant	4.07	33.84	Individual or average values do not exceed the limits specified
SULPHUR DIOXIDE			
Extrusion Plant	0.27	2.25	Individual or average values do not exceed the limits specified



PART D

Hazardous Wastes

Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, as amended from time to time.

Hazardous Wastes	Total Quantity MT	
	During the financial year (2024-25)	During the financial year (2025-26)
a) From Process		
Spent Caustic solution	83.67	127.03
Solidified Spent Caustic	12.91	0.00
Used oil / Waste oil	1.74	1.38
b) Waste Coating Material	0.22	0.30
c) From other sources or Pollution Control facilities	NIL	NIL

PART- E

SOLID WASTES

	Total Quantity MT	
	During the financial year (2024-25)	During the financial year (2025-26)
Aluminium Scrap Recycled	5344.4	5336.92
Aluminium dross and skimming's - generated	149.54	152.42
Aluminium dross and skimming's -Sold	115.27	102.70



PART -F

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

Hazardous Wastes

1. **Caustic Solution:** Caustic Solution (Alkali Residue), which contains Sodium Hydroxide, Sodium Carbonate and Sodium Aluminate. This waste is generated during the die cleaning process in Extrusion plant. This waste is stored in steel tank/ drums kept on concrete floor under roof. During the year 132.90 MT of spent caustic was generated and 127.03 MT of spent caustic was sent to the common TSDF (KEIL) at Ambalamedu for treatment and disposal at their site, as authorized through the consent order.
2. **Lead Acid batteries:** These wastes contain lead and acid. Used batteries generated if any are stored under cover on concrete floor and are disposed through buyback option PEE PEE Batteries- Kochi).
3. **Used Oil/ Waste Oil:** This contains oil and is stored in drums, kept on concrete floor with proper roof within company premises. Total 1.38KL of Used oil was sold to Swaraj Biofuel Energy Division II, 1256-8 NIDA, Kanjikode west Palakkad 678621 (authorized re-processors registered with the Ministry of Environment and Forests, Government of India) and disposed.
4. **Powder Coating Waste:** Waste generated from Powder Coating, powder residues during surface coating of aluminum. During year 0.3 MT of powder waste was generated and disposed of through authorized TSDF (KEIL) Ambalamedu.
5. No other waste was generated/disposed of during FY26.

Solid Wastes

1. **Aluminium dross and skimmings:** This contains Aluminium metal in the form of oxides. This is sold to outside parties. Around 102.7 MT of dross was sold during the period.
2. **Aluminium sawings:** These are obtained while cutting billets in casting plant to desired sizes. These are either sold to external parties periodically or converted into aluminium ingots / hardeners for use in our production process. About 51.6 MT of sawing's were sent for conversion to solid aluminium ingots and hardeners during the year.
3. **Aluminium saw dust:** These are obtained while cutting extruded sections at the extrusion and post-extrusion plants. These are either sold to external parties periodically or converted into aluminium ingots / hardeners for use in our production process. About 28.48 MT of saw dust waste was sent for conversion to solid aluminium ingots during the year.
4. **MS scrap material:** These are mild steel items and stored at Scrap yard and periodically sold to external parties/recyclers.
5. **Wooden scrap:** Sold to outside parties/recyclers periodically.



6. **Billet scrap and Extrusion scrap:** Billet scraps generated in Casting plant and Extrusion plant will be recycled in our casting plant or sent to our own plants in other locations. About **5008 MT** of aluminium scrap was recycled in our casting plant during the year.
7. **Paper & Plastic:** These items were stored in scrap yard and sent to recyclers periodically.

PART G

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

1. Air

No harmful gaseous emissions from any of the operations in the factory. Casting plant furnace flue gases are let out only through stacks. The emission values are very much within the limits. Hence there is no impact on environment. Forklift is used in Plant for internal transportation and material movement, which is Electric/Mechanical. H.S.D/Diesel is used as fuel in Mechanical Forklift. The luxuriant growth of vegetation in and around the company illustrates that no environmental damage has been caused by any of the operations of our plant. Saplings of various types of plants and trees are being planted to promote environment friendly atmosphere inside the plants and colonies.

2. Water

Water is not used in our production process. Water used for cooling purposes is not polluted and it is recycled through our water re-circulation system and hence does not have any adverse impact on water bodies and surrounding areas. We do not discharge effluent water into the river. Sewage Treatment Plant has been installed in the factory. Treated water from STP is used for irrigation of plants and trees.

3. Hazardous waste:

a) Caustic Solution:

Spent caustic solution is disposed through KSPCB approved common TSDF as authorized through consent.

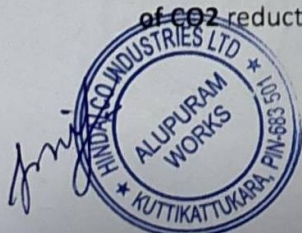
b) Powder Coating Waste: The waste generated is disposed through KSPCB approved common TSDF as authorized through consent.

c) Used oil/ waste oil:

Used oil/ waste oil, are stored in drums under cover on concrete floor. This is sold to authorized re-processors in Kerala state, having registration with the Ministry of Environment and Forests, Government of India. Hence there is no impact on environment.

4. Solar power plant:

The company had installed a solar power plant with capacity 1MW in 2016 followed by additional 2 MW in 2020. In solar power plant, photovoltaic cells are used to convert sunlight into electricity. The capacity of the plant expanded to total of 5MW during the year 2023-24. The total energy generated from the solar plant during the FY26 is **7723.1 MWH** which is equivalent to **7485 Tons** of CO₂ reduction.



Impact on cost of production

2025-26

Capital Expenditure on Environment

- Rs. 2.04 Lakhs

Revenue Expenditure on Environment Protection
(Operating Cost for STP, Air Pollution Control Systems,
Disposal of Wastes
Analytical services from out source labs etc.)

- Rs. 21.70 Lakhs

PART -H

Additional measures /investment proposals for environment protection including abatement of pollution, prevention of pollution

1. MBR based sewage treatment plants installed in our labour and staff colonies with capacity 40 KLD each.
2. The company has set up in phases by FY24 a 5 MW photovoltaic Solar Power Plant to tap out Non-renewable energy.
3. More emphasis is given on scrap recycling in casting plant so that primary aluminium ingot consumption is reduced, thereby reducing dependence on power intensive aluminium smelting processes.
4. Because of the enhanced quality requirements of our customers, most of our billet requirements are met from our sister concerns at Renukoot (Uttar Pradesh) and Mahan (Madhya Pradesh) and HAAL where state-of-the-art casting facility is available to produce good quality billets and apart from that external like CMR and as customer specifies.
5. Installation of energy efficient recuperators in casting plant melting furnaces to optimize furnace oil consumption thereby conserving the fast-depleting natural resource.
6. Waste aluminum sawing's generated at our casting plant and saw dust generated at extrusion plant are being recycled and converted into ingots and hardeners for reuse in the production process.
7. Streetlights inside the company and colonies are being replaced by energy efficient LED lamps.
8. Translucent roofing sheets are being provided in the plant (for improved lighting and saving energy). Only energy efficient lamps/bulbs will be used for all further replacements in the lighting system.
9. Working towards paperless office - No hard copies for purchase order, indent, leave card, requisitions, etc.



PART- I

Any other particulars for improving the quality of environment:

Process / Production technology

- Technology upgradation for enhanced energy efficiency, better utilization of resources and for protecting and improving the environment. Incorporated double puller mechanism in our P11 press to improve productivity and throughput.
- Carried out various technological up-gradations for minimizing noise pollution and for enhancing the energy efficiency of presses.
- Aluminium log heating facility using LPG in place of cut billet using electricity in extrusion press to switch over our process to Green Energy and to improve productivity.
- CMR billets are used in P11 thereby reducing the consumption of primary aluminium and supporting resource conservation and circular economy initiatives.

Raw Material

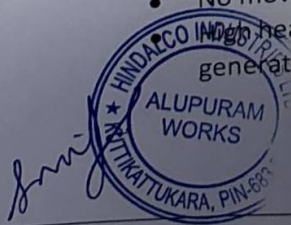
- Inputs to casting plant furnaces mainly comprise of aluminium scrap generated in the casting and extrusion plants. This constitutes around 91.3 % of the total input to the furnaces for manufacturing extrusion billets. Scrap utilization reduces dependency on pure metal, which is produced by energy-intensive electrolytic processes.

Water Pollution Aspects

- MBR based sewage treatment plants are installed in our labor and staff colonies with capacity 40 KLD each.
- Water is used only for industrial cooling in the manufacturing process.
- Zero discharge to River Periyar / outside boundaries since 2007
- Sewage Treatment in Plant and both colonies to treat sewage water and used for irrigation purposes in our own land.

Air Pollution Aspects

- Ambient air quality and stack gas monitored periodically.
- Ambient air monitoring as per NAAQ standards.
- Dust/fume collection system in cutting saws.
- Shot blasting machine with dust collection installed in Die shop to prevent air pollution.
- Acoustic enclosure for pumps and motors (separate rooms) in extrusion presses.
- Replacement of High-noise generation pumps with new Low-noise generation pumps.
- Replacement of high noise imported double shaft motors with indigenous motors.
- Replacement of noisy reciprocating compressors with low noise screw compressors
- Recuperators have been provided in furnaces for the recovery of heat from waste flue gases. The air is pre-heated to around 200°C with flue gases before supplied to burners.
- No movement of Vehicles without PUC is allowed inside the plant.
- High heat generating Sodium Vapor streetlamps replaced with energy efficient & less heat generating LED lamps.



solid Waste/Hazardous Wastes

- Plastic packing materials are sent for recycling
- Working towards paperless office - No hard copies for purchase order, indent, leave card, requisitions, etc.
- Solid waste generated in canteen is disposed of through Biodigester.
- Aluminum chips collected through chip collection system and recycled
- Minimizing the use of wooden material for packing applications.

Noise pollution Aspects

- Replacement of noisy reciprocating compressors with low noise screw compressors
- Periodic noise level monitoring inside plant and plant boundary. Action plans and review by production departments.
- Acoustic enclosure for pumps and motors in extrusion plants
- Replacement of cutting oil with lubricants in saw to reduce noise level
- Noise level survey conducted in the whole plant on a regular basis, and engineering controls were explored and implemented in high noise areas.
- Audiometric test for all employees during PME.
- Issue of Earmuff and Ear plugs to all employees on regular basis
- Replacement of high-noise generation pumps with new low-noise generation pumps

Land Pollution Control

- No discharge of water or effluents outside company premises.
- No spillage of oil or other hazardous wastes / chemicals on soil. Such substances are handled only in places with impervious floors.
- Green belt developed in several areas inside and outside the company and maintained.

Other clean technology measures

- Promotional activities of tree plantation through campaigns etc. are in place
- Widespread lawns and landscapes have been created inside the company to provide more greenery and environmental protection measures.
- Variable Frequency Drives for most of the critical equipment
- PLC operated daylight control & timer-controlled streetlights.
- Translucent sheets in the building roof and sides to save power during daytime.
- Natural Eco ventilators in place of powered exhaust
- PLC controlled furnaces
- Capacitor Banks
- Energy efficient and super energy efficient motors
- Energy efficient lights
- Energy meters at all major energy centers
- Networking of furnaces for monitoring energy loss
- The unit is certified for Environment Management System (ISO 14001: 2015), Quality Management System (ISO 9001: 2015) and Occupational Health and Safety (ISO 45001: 2018)
- Minimize use of wooden material for packing application

