

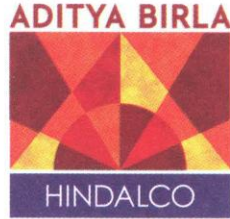


Hindalco Industries Limited

(Unit – Muri Works)



Environment statement for the financial year ending the 31st March 2019



Ref. No. Hindalco/Env/2018/201

September 25, 2019

To,
The Member Secretary
Jharkhand State Pollution Control Board
T.A. Bhawan, HEC – Complex, Dhurwa, **Ranchi – 834 004**

Sub.: Submission of Environment Statement (Form-V) for financial year 2018-19

Dear Sir,

This is with reference to the aforesaid subject regarding submission of Environment Statement (Form-V) under Environmental (Protection) Rule, 1986

Hereby, we are pleased to submitting Environment Statement (Form-V) for the financial year 2018-19 to your esteemed office for our Hindalco Industries Limited, Muri Works.

Thanking You,
Your's Faithfully
For & Behalf of
Hindalco Industries Limited - Muri Works

Prasanta Bose

(Prasanta Bose)
Technical Head

Encl.: Environment Statement (Form-V)

Copy to:

The Regional Officer,
Jharkhand State Pollution Control Board
E-1, CTI Colony, **Ranchi – 834 004**

Hindalco Industries Limited

Muri Works: P.O. Chotamuri - 835 101, Dist. - Ranchi, Jharkhand, India

T: +91 6522 244233, 9708036910 | E: hindalco.muri@adityabirla.com | W: www.hindalco.com

Registered Office: Ahura Centre, 1st Floor, B Wings, Mahakali Caves Road, Andheri (East), Mumbai - 400093. T: +91 22 66917000 | F: +91 2266917001

Corporate ID No.: L27020MH1958PLC011238

FORM – V
Environment statement for the financial year ending the 31st March 2019

PART – A

i) Name and address of the owner / occupier of the industry, operation or process	:	Mr. NN Roy (Joint President & Unit Head) Hindalco Industries Ltd. Muri Works, P. O.: Chotamuri, Distt.: Ranchi 835101, Jharkhand
ii) Industry category Primary – (STC Code) Secondary – (SIC Code)	:	Alumina Refinery Plant (Large scale industry)
iii) Production capacity	:	575 KTPA
iv) Year of Establishment	:	1948
v) Date of the last environmental Statement submitted	:	May 12, 2018

PART – B

Water and Raw Material Consumption

i) Water consumption m³/d

Process : 4385

Cooling : NA

Domestic : 1268

Name of Products	Process water consumption per unit of product output (m ³ /t)	
	During the previous financial year	During the current financial year
1) Alumina	5.23	2.26

ii) Raw material consumption

Name of Raw Materials		Name of Product	Consumption of raw material per unit of output	
			During the previous financial year	During the current financial year
Bauxite	t/t	Alumina / Alumina Tri – hydrate	3.168	3.078
Caustic Soda (as NaOH)	kg/t		143.700	136.4
Coal @3500 GCV)	t / t		0.964	0.971
Diesel	Lit / t		0.436	0.895
Furnace Oil	Lit / t		72.838	73.53
Lime	Kg / t		38.500	39.02
Filter Cloth	m ² / t		0.011	0.022
Synflock	Kg / t		1.095	1.024
Defoamer	Kg / t		0.073	0.080
Tray Flocculent	Kg / t		0.003	0.000

FORM – V
Environment statement for the financial year ending the 31st March 2019

PART – C

Pollution discharged to environment/unit of output

(Parameter as specified in the consent issued)

1) Pollutants	Quantity of pollutants discharged (mass/day) i.e. Ton/day	Concentrations of pollutants in discharges (mass/vol.) i.e. kg/m ³	Percentage of variation from prescribed standards with reasons
a) Water (Effluent)			
TSS	0.019	0.023	-76.75
BOD	0.011	0.014	-55.00
COD	0.136	0.170	-32.00
O&G	0.004	0.005	-50.20
b) Air (PM)			
Refinery	0.11	0.00005	-34.50
Power Plant	0.88	0.00012	-25.25

Note: Percentage of variation is lower from prescribed standards due to uninterruptedly operation and maintenance of ETP & ESPs (equipped with Refinery and Power Plant Boiler stacks).

PART – D

HAZARDOUS WASTES

(As specified under Hazardous Wastes (Management & Handling & Trans boundary Movement Rules)

Hazardous Wastes	Total Quantity	
	During the previous financial year 2017-18	During the current financial year
1. Used/ Spent Oil (Cat-5.1)	8.16 MT	13.48 MT
2. Waste containing Oils (Lubricant drums) - 5.2	0.00 MT	18.25 MT
3. Lead acid batteries (Cat-9.3)	900.00 Kg	178 Nos.
4. Discarded asbestos (Cat-15.2)	0.00 MT	0.00 MT
5. Vanadium Sludge (Cat-11.7)	562.51 MT	1329 MT

- a) From Process: 1329 MT of vanadium sludge generated from process as a by-product and same quantity has sold out through authorized recyclers.
- b) From pollution control facilities: Not Applicable

FORM – V
Environment statement for the financial year ending the 31st March 2019

PART – E

Solid Wastes

Solid Wastes	Total Quantity (Metric Ton)	
	During the previous financial year (2017-18)	During the current financial year (2018-19)
a) From process (generation)		
*Bauxite Residue (Red Mud)	652166	723749
**Fly ash (from power plant)	125776	105091
b) From pollution control facilities	Nil	Nil
c) -		
1. Quantity recycled or re-utilized within the unit	Nil	Nil
2. Sold (Bauxite Residue i.e. red mud)	27613	25559
3. Disposed		
*Bauxite Residue	624553	698190
**Fly ash	125776	104967

*Bauxite Residue (Red Mud) is transported by dumpers to own red mud pond by a process called DMS (Dry Mud Stacking).

As you know various researches is going on worldwide for the red mud utilization and till date little scope is available for this. We have installed second pressure filter with Chinese technology to increase percentage solid in mud. One number of such pressure filters is already installed, commissioned and operating successfully. Bauxite Residue (Red Mud) is transported by dumpers to own red mud pond by a process called DMS (Dry Mud Stacking). In last 5 years mud despatched to the cement industry is given in the below:

Year	Qty.(MT)	Despatch To
2015-16	14705	ACC Cement
2016-17	31398	
2017-18	27613	
2018-19	18032	
2018-19	25559	UltraTech Cement Limited

**Fly ash disposed off through filling of low lying area under prior intimation to the Jharkhand Pollution Control Board (JSPCB) as well as supply to bricks and cement manufacturing company 13254 MT and 13242 MT respectively for further utilization.

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.

Solid Wastes: Residue left after digestion of Bauxite, called “Red Mud” is filtered under pressure by Pressure Filters up to a mud consistency of around 72-75 % solids. The Bauxite Residue (Red Mud) is transported by dumpers to own red mud pond by a process called DMS (Dry Mud Stacking). We have established filter press project – Reduce caustic consumption with mud and reducing mud foot print with increased solids. We have initiated to dispose Bauxite Residue for further utilization in cement application.

Characteristics of Bauxite Residue (Red Mud)	
% SiO ₂	8.46
% Fe ₂ O ₃	41.49
% TiO ₂	14.28
% Al ₂ O ₃	17.42
% Na ₂ O	6.54

PART – G

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

Hindalco Industries Ltd, Muri Works is a flagship company of the Aditya Birla Group engaged in Aluminium Business is fully committed to sustainable development and play a constructive role in Building “A Green and Clean Environment” by adoption of state-of-the-art-technology.

PART – H

Additional measures/investment proposal for environmental protection including abatement of Pollution, Prevention of pollution

Following measures has been proposed for the environmental protection during FY'20 is:-

1. Renovation of Sewage Treatment Plant (STP)
2. Procurement of truck or tractor mounted water tanker
3. Procurement of compost machine to making compost from food waste

PART – I

Any other particulars for improving the quality of the environment

The measures have been taken to improving the quality of environment is given as following:

- 4 Nos. of CAAQMS has installed and real time data connected to the JSPCB & CPCB servers.
- ETP & STP equipped with the EQMS & real time data being transferred to the JSPCB & CPCB.
- Refinery & Power Plant stacks equipped with the CEMS & real time data being transferred to the JSPCB & CPCB.
- Bio-Medical Waste is being disposed-off through JSPCB authorized Common Bio Medical Waste Treatment Facility (CBMWTF).
- Dense plantation being done in and around plant premises.
- Sewage & Sludge generated from STP is being used in horticulture activities.
- Disposal of wastes including BMW, E-waste, H&O wastes etc. are being done in safe and environment friendly manner through authorized vendors.
- Pre & Post monsoon Hydrological study around 1 km radius of the RMP is being conducted from 2006 onwards. Recently Pre & Post monsoon Hydrological study was also conducted by ISM, Dhanbad for ground water sources 60 locations at Muri and as per the report all the parameters are well in the limit.
