



Ref. HIL/KBM/CECB/1119/2023

Date: 22.09.2023

To,

The Member Secretary
Chhattisgarh Environmental Conservation Board
Paryavas Bhawan, North Block, Sector-19,
Nava Raipur Atal Nagar,
Raipur (Chhattisgarh)- 492002

Sub: - Submission of Environmental Statement in respect of our Kudag Bauxite Mine.


Dear Sir,

Please find enclosed is the Environmental Statement in Form – V in respect of our Kudag Bauxite Mine for year 2022-23.

Hope you will find it in order. Please acknowledge the receipt.

Thanking you in anticipation.

With regards
For Hindalco Industries Ltd.


(Vijay Chauhan)
Agent of Mines
Kudag Bauxite Mine

Enclosed :- As above

Copy to:- (1) Regional Officer, CECB, Ambikapur

ANNEXURE
(ENVIRONMENTAL STATEMENT FORM -V)

(See Rule-14)

Environmental Statement for the financial year ending with 31st March 2023)

PART - A

- (i) Name and address of the Owner / Occupier of the industry : HINDALCO INDUSTRIES LIMITED
KUDAG BAUXITE MINES,
Operation or process : At PO: Samri, Dist. BALRAMPUR (CHHATTISGARH)
- (ii) Industry Category : Primary - (STC Code) **Not applicable**
Secondary - (STC Code) **Not applicable**
- (iii) Production capacity – Units- : 60,000 MT/year (Bauxite)
- (iv) Year of establishment : 1997
- (v) Date of last environment Statement submitted : 26.07.2022

PART - B

Water and Raw material consumption

(i) Water consumption m³/day:

Process : NIL (As Our Mining process of bauxite is carried out by open cast method
From -shallow depth, the process does not require any consumption of water.)

Cooling/ Sprinkling : 12.00 KL/day (Dust suppression at haul road and green belt development)

Domestic : 2.0 KL /day (Drinking water for mine workers at sites)

Sl. No.	* Name of the Product	Process water consumption of per unit of product output	
		During the previous financial year (1)	During the current financial year (2)
1.	Bauxite	NIL	NIL

*Industry may use codes if disclosing details of raw material would violate contractual obligation, Otherwise all industries have to name the raw material used.

(ii) Raw material consumption (key inputs)

Sl. no.	Name of raw materials	Name of products	Consumption of raw material per unit of output	
			During the current financial year- 21-22	During the current financial year- 22-23
(1)	Explosives	Bauxite		
	i. Nitrate Mixture (solar prime/ aquadyne)		0.0144 Kgs/ MT	0.111 Kg/MT
	ii. Ord. Detonators		0.0151 Nos/MT	0.007 No/MT
	iii. Safety fuse		0.0174 Mtr./MT	0.017 Mtr/MT
	iv. Ammonium Nitrate		0.3128 kg/MT	0.065 Kg/MT
	v. DTHD		0.105 Nos./MT	0.059 No/MT
	vi. STLD	0.105 Nos./MT	0.059 No/MT	
(2)	POL	Bauxite		
	(i) Diesel Oil (ii) LUB		1.35 Ltr/MT 0.051 Ltr/MT	2.297 Ltr/MT 0.074 Ltr/MT

PART- C

Pollution discharged to environment / Unit of output
(Parameter as specified in consent issued)

Sl. no.	Pollutant	Quantity of pollutants discharged (mass/day)	Concentration of pollutants in discharge (mass/volume)				% of variation from prescribed standards with reasons
(a)	Water	NIL	NIL				NIL
(b)	Air	Respirable- particulate matter	Sairaidh Campus	New Kudag/Nr. Weigh Bridge	Old Kudag/Mining Area	Samri Gopatu/ Nr. Weigh Bridge	Within Limit Within Limit Within Limit
		PM-10 µg/m ³	57.2	58.8	56.2	59.7	
		PM-2.5µg/m ³	20.8	22.2	20.4	22.7	
		Sulphur dioxideµg/m ³	9.3	10.1	9.7	10.9	

PART – D

Hazardous wastes

(As per specified under hazardous wastes management and handling rules, 2016)

Sl. No.	Hazardous waste (waste oil and oil emulsion)	Total quantity (Kg.)	
		During the previous financial year 21-22	During the current financial year 22-23
(a)	From process	Nil	Nil
(b)	From pollution control facilities.	Nil	Nil

PART- E

Solid wastes (Mined out rejections)

Sl. No.	Particulars	Total Quantity (In MT)	
		During the Current financial year 2021-22	During the Current financial year 2022-23
(a)	From process	128394.651 MT including OB	148831.88 MT including OB
(b)	From pollution control facilities.	NIL	NIL
(c)	(i) Quantity recycled or reutilized within the limit.	128394.651 MT including OB	148831.88 MT including OB
	(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.

Hazardous waste –

- (1) Waste oil and oil emulsion: - 0 Liters (Generated from the vehicles) &
0 Liters (Sold to authorized agency)

Solid Waste -

- (1) Mined out rejection :- 148831.88 MT Backfilled in the mined out area.

PART -G

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

The impact of pollution control measures on conservation of natural resources are as following: -

(i) **Reclamation:** - By adopting process of reclamation, land is again used for agricultural and afforestation purpose. So, reclamation is a pollution control measure which has a positive impact on conservation of land, natural resource of agriculture & forest.

The mined out area after reclamation is returned back to the land owners (in case of Adivasi land) so they less hesitate in providing their land for mining. We also planted trees as per their requirement, digging ponds for fish cultivation etc. The reclamation impacted positively on the purchase of land by us for production purpose.

(ii) **Rehabilitation:** -As compared to virgin land, dense plantation has been done by the mine management on the reclaimed land providing protection to fauna.

(iii) **Development of Green belt:** To ensure dense canopy around the Mining Lease area, we are already in process of maintaining a green belt around the mining lease area by Regular plantation at the project cost. More than 3,000 saplings have been planted along the sides of the road within the lease area, protected by Proper Barbed wire fencing all along the sides of the Plantation. This not only helps to curb pollution but also increases the Green Cover of the Lease area.

(iv) **Suppressing of dust at source:** - Due to suppressing of dust at source by mine water, not only the air environment has improved but the efficiency of dumper drivers & others machinery operators and the productivity of miners have also increased. This has been done without disturbing ground water table.

(v) **Controlled blasting:** - Controlled blasting technique has been adopted as practice for reducing the noise level, ground vibration, flying rock issues and dust generating problem during mining. These are the basic issues of surrounding society for mining company. This create the negligible impact in developing relationship with surrounding villagers.

We are focused on minimizing the impacts caused by blasting. So our relationship with surrounding society is positive and this reflects in smooth and continuous production throughout years.

(vi) **Provision of Siltation pits:** - We have made the siltation pit across the working pit. These pits protect the flow of silt in the rainy seasons. These deed floated silt along with rain water gets accumulated and are spread over agriculture land thereby affecting their fertility and hummus of the ground.

So by making siltation pit, we suppress the silt of waste dump and overall protect the surrounding agriculture land.

(vii) **Controlling noise & vibrations:** - All the machineries are periodically checked to prevent the noise and vibration at the source. Avenue plantation is also done as acoustic noise barrier in the lease area. Due to adopting noise & vibration controlling measures on machines not only environment has improved but efficiency of our machines has increased resulting in increase in our production.

(viii) **Preventive maintenance:** - Preventive maintenance of vehicles not only consumes less fuel & helps in preserving of our natural resources of fuel but have also increased production due to decreased down time of machines.

Impact of the pollution control measures taken on cost of production are as following: -

(i) **Reclamation:** - Mine waste & rejection are directly filled into the mined out area because we exercise sequential back filling practice. As there is practically no re-handling so reclamation process does not add to our production cost.

(ii) **Rehabilitation:** - The cost of rehabilitation comes approx Rs. 5 Lacs per ha of mined out land.

(iii) **Development of Green Belt** – The total cost of developing green belt within the lease area comes approx. Rs. 5 Lacs.

(iv) **Suppressing of dust at source:** - The cost of suppressing dust at source comes to about Rs 1.25 per MT of production which is negligible because our environment improves & production increases.

(v) **Controlled blasting:** - It is a matter of exercising some practices & its cost in terms of production is almost negligible.

(vi) **Provision of siltation pits:** - Its cost in terms of production is almost negligible but its application contributes a lot to protect degradation of land.

(vii) **Controlling noise & vibrations on machines:** - Its cost in terms of production is almost negligible but its application has contributed a lot to increase our production.

(vii) **Preventive maintenance of machines:** - It adds to our production & its cost in terms of production is almost negligible.

PART- H

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

The main source of pollution in the mine area is due to generation of dust & emission of gases due to running of vehicles. To abate the pollution due to dust we sprinkle water on haul roads and other places of generation of dust. Controlled blasting method is being practiced to reduce noise & vibrations. After mining, land is reclaimed and rehabilitated by planting tree saplings. Thousand numbers of trees are planted every year to abate pollution & improve environment. We do timely repair & maintenance of vehicles to reduce pollution.

We prepare the saplings in our own nursery at the mine. A team of 6-8 people works throughout the year, for nursing the plants & trees. An expenditure of Lacs of rupees is done every year on this account.

PART – I

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

The Management is highly conscious about abatement of pollution and maintenance of clean, green and healthy environment. The company is also committed to maintain and continually improve the environment. Regular monitoring of quality of ambient air and water in mines area is being carried out to enable us taking appropriate decision timely. To enhance green belt, in & around the mines periphery, extensive plantation work is carried out every year. During last financial year 6020 saplings have been planted under afforestation programme. Large no. of plant saplings of various species have been distributed to nearby villagers under social forestry scheme in order to protect and maintain environment through tree plantation. The environmental week is celebrated every year to generate awareness among public to protect environment.



Agent of Mines
Kudag Bauxite Mine