



Letter No.: -HIL/ESR/GP-IV/5 -19-20/

Date: 18.09.2020

The Member Secretary,  
Chhattisgarh Environment Conservation Board,  
Paryawas Bhawan, North Block Sector-19,  
Naya Raipur Chhattisgarh - 490099.

Sub.: Submission of Environmental Statement Report of the 1 MTPA Under Ground Captive Coal Mine, Gare Palma IV/5 Coal Mines of Hindalco Industries Limited, Village – Milupara, Tehsil – Tamnar, District – Raigarh, Chhattisgarh.

- Ref. 1. Consent under section 21 of the Air (Prevention and control of pollution) Act, 1981 no. 7359/TS/CECB/2018, Naya Raipur, Dated: - 21/03/2018.  
2. Consent under section 25/26 of the Water (Prevention and control of pollution) Act, 1974 no. 7357/TS/CECB/2018, Naya Raipur, Dated: - 21/03/2018.

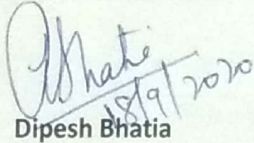
Dear Sir,

With reference to above subject we are submitting herewith the **Environmental Statement Report** in the prescribed format (Form - V) in respect of the **1 MTPA Under Ground Captive Coal Mine, Gare Palma IV/5 Coal Mine of M/s Hindalco Industries Limited, Village – Milupara, Tehsil – Tamnar, District – Raigarh, Chhattisgarh** for the Financial Year **2019 -20**.

Receipt of the statement may kindly be acknowledged.

Thanking you,

Yours faithfully,  
For **Hindalco Industries Limited**,

  
Dipesh Bhatia

(Mines Agent/Vice- President)



Encl.: As above

- CC: 1. **The Regional Director (S)** Ministry of Environment, Forest & Climate Change, Regional Office, (West Central Zone), Ground Floor, East Wing, New Secretariat Building Ground Floor, Civil Lines, Opposite VCA Ground, Nagpur-440001.  
2. **The Regional Director**, Regional Directorate (Central), Bhopal, Central Pollution Control Board (MoEF & CC, GOI), "Parivesh Bhawan" Paryavaran Parishar, E – 5, Arera Colony, Bhopal (MP), 462016  
3. **Regional Officer**, Chhattisgarh Environment Conservation Board (CECB), T. V. Tower Road, Raigarh (C.G.)

**Hindalco Industries Limited**

Gare Palma Mines ( IV/4 & IV/5), Vill & Po: Milupara , Tehsil: Tamnar Dist: Raigarh- 496107 , Chhattisgarh  
T: +91 7762 228212, Website : www.hindalco.com E mail : hindalco@adityabirla.com  
Registered Office : Ahura Centre, 1st Floor, B Wing, Mahakali Caves Road Andheri (East) , Mumbai 400093, India  
T: + 912266917000 | Fax: + 912266917001  
Corporate ID No: L27020MH1958PLC011238



# FORM V

(See rule 14 of Environmental Protection Act, 1986)

Environmental Statement for the financial year 1<sup>st</sup> April -2019 to 31<sup>st</sup> March 2020.

## PART A

(i)	Name and address of the owner/occupier of the industry operation or process.	Sh. Dipesh Bhatia (Mines Agent), Gare Palma IV/5 Coal Mine of M/s Hindalco Industries Limited, Village – Milupara, Tehsil – Tamnar, District – Raigarh, Chhattisgarh 496107
(ii)	Industry category Primary – (STC Code) Secondary - (STC Code)	Primary
(iii)	Production Capacity – Units -	Coal – 1.0 MTPA
(iv)	Year of establishment	Coal Mine vested to Hindalco Industries Limited vide order no. 104/13/2015/NA dated 23 <sup>rd</sup> March 2015. The EUPs are as follow- 1. CPP (900 MW), Lapanga, Sambalpur, Odisha 2. CPP (467.5 MW), Hirakud, Sambalpur, Odisha
(v)	Date of the last environmental statement submitted	28.09.2019 for FY 2018- 19

## PART B

### (1) Water consumption M3/d

(i)	Process	523.0 M <sup>3</sup> /day
	Cooling	
(ii)	Domestic	43.67 M <sup>3</sup> /day
(iii)	Irrigation & Agriculture use (Community Supply not for drinking purpose)	7760 M <sup>3</sup> /day
	Total	8326.6 M <sup>3</sup> /day

S. No.	Name of Product	Process water consumption per unit of product output	
		During the Previous financial year (2018 - 19)	During the current financial year (2019 - 20)
(1)	Coal	NA	NA

This is a coal mine and there is no processing / cleaning of coal is being done.

### (2) Raw material consumption

S. No.	Name of Raw material	Name of product	Consumption of raw material per unit	
			During the Previous financial year (2018 - 19)	During the current financial year (2019 - 20)
1.	NA	Coal production for FY 2019 -20 : 0.126 Million Metric Ton	NA	NA

Industry may use codes in disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw material used.



**PART C**

Pollution discharged to environment/ unit of output.  
(Parameter as specified in the consent issued)

S. No.	Pollution	Quantity of pollutants discharged (mass/day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons	
1	Water	No Discharge	No Discharge	<b>No Variation</b> 05 Nos. of settling pond & 02 nos of ETP (Capacity 200 m <sup>3</sup> / Hr Each) along with Lamella clarifier and chemical dosing arrangement have been established for the treatment of mine seepage water. 02 Nos. of RO plants has been installed for supplying the pure & safe water at mines office & other areas inside the mine premises for drinking purpose. Remaining water from outlet of ETPs are being used by the community for irrigation & agriculture purpose (not for drinking purpose).	
2	Air	The ambient air quality in & around the mining lease area conforms to the standard prescribed by CPCB as per NAAQS – 2009. As per the monitoring reports submitted by CECB & MoEF & CC approved & NABL accredited Laboratory, the concentration of ambient air quality parameters varies in the following ranges throughout the year conforming the standard-  AAQM Report attached as <u>Annexure - 1</u>			
	Parameters	Pollutant Concentration	Standards (NAAQS - 2009)	Variation from prescribed standards	
	2(i)	PM10	38 – 60 (Average : 55)	100	No variation
	2(ii)	PM2.5	20 – 29 (Average : 26)	60	No variation
	2(iii)	SO2	12 – 16 (Average : 14)	80	No variation
	2(iv)	NOx	19 – 26 (Average : 22)	80	No variation

**PART D**

**Hazardous Wastes.**

(As specified under Hazardous Wastes (Management and Handling Rules 1989))

S. No.	Hazardous Wastes	Total Quantity (kg)	
		During the previous financial year (2018 - 19)	During the current financial year (2019 - 20)
a	From process	0.81 KL, Used Oil (Category - 5.1)	500 Ltr. Used Oil (Category - 5.1)  70 kg Waste/ Residue containing Oil (Category - 5.2)



			0.0 kg Contaminated Cotton Waste/ Other Cleaning Material (Category - 33.2)
b	From pollution control facilities	Nil	Nil
c	Quantity recycled or re - utilized	<p>Hazardous Waste generated at mine site is disposed off through CECB authorized recycler following due standard practices.</p> <p>Recycler: <b>M/s Supreme Petro Synth Specialities, Bhilai, Durg</b></p> <p>HW Authorization No.: <b>11482/HSMD/HO/CECB/2020</b> dated <b>19/03/2020</b>.</p> <p>Valid up to : <b>12/03/2025</b></p>	

**PART E**  
**Solid Wastes**

S. No.	Solid Waste	Total quantity	
		Previous financial Year (2018 - 19)	Current financial year (2019 - 20)
A	From process	NA	NA
B	From pollution control facility	NA	NA
C	Quantity recycled or re- utilizes within the unit		
(i)		NA	NA
(ii)	Sold	NA	NA
(iii)	Disposed	NA	NA

Gare Palma IV/5 is underground coal mine producing ROM coal. There is no processing / cleaning is being done. Thus no solid waste generated.

**PART F**

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

**Characteristics of Used Oil**

**A. Physical**

1. State - Liquid/ Semi Liquid.
2. Density gm/l - 0.894
3. Flash Point °C - 67.0

**B Chemical**

1. Sulphur (%by mass) - 2.49
2. Ash (%by mass) - 0.956

**Used Oil (HW Cat 5.1) & Waste/ Residue containing Oil (Category - 5.2) which is generated from the HEMM/ equipment during scheduled maintenance is collected and stored securely in MS barrels after due segregation and kept over an impervious floor under specifically designed HW storage shed.**

**Analysis report attached as Annexure - 2**



PART G

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

We have adopted eco-friendly technologies in mining operation and measures are taken as- construction of ETPs, STP & RO Plants, Fixed type & Truck mounted water sprinklers, Green belt development, installation of Automatic ground water level recorder & Automatic weather monitoring station, installation of LED display board to display the monitoring data of environmental quality parameters of GP Mines at the entrance of the Mine main gate etc.

PART H

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

For strengthening of environmental protection measures like Air pollution control measure, Water pollution control measure, water sprinkling, plantation etc. The expenditure details enclosed as Annexure-3.

PART I

Any other particulars for improving the quality of the environment

Company have planted about 47000 saplings in mines area details enclosed as Annexure - 4. Company have further plan for phase wise plantation in available open/available area. Company is providing safety training to all working staff before assignment of job in V.T. Center that is established by the company inside the mine premises.  
Personal Protective equipment's- Like Nose mask, Safety Helmet, Earmuff etc. have been provided to all workers that are working in mines.  
To avoid fugitive dust emission regular water sprinkling on road is being done. Company is being provided job specific PPEs like noise protective equipment – earplug & ear muff to worker engaged in high noise area .

## Gare Palma IV/5 Coal Mines

## Ambient Air Quality Monitoring Report for the Financial Year 2019 - 20

Parameters	Unit	Months														
		Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Min	Max	Average
PM 10	(µg/m <sup>3</sup> )	60	59	57	59	55	38	47	55	55	60	55	57	38	60	55
PM 2.5		28	29	28	27	29	20	22	25	25	25	24	26	20	29	26
SO <sub>2</sub>		16	15	14	16	16	14	15	13	12	13	13	14	12	16	14
NO <sub>2</sub>		21	20	20	20	22	19	19	26	26	26	26	23	19	26	22





HDD-27E, PHASE III- NEAR JP CHOWK,  
 SAND ROAD NO -2, NADDI NAGAR, RAIPUR, C.G. - 498099  
 PFI - 0771-4027777 | email - ultimatero@rediffmail.com

Format No. - UES/008/06

NAME & ADDRESS OF THE CUSTOMER <b>TO,</b> <b>HINDALCO INDUSTRIES LIMITED,</b> <b>GARE PALMA - IV/5,</b> <b>MILUPARA U/G COAL MINE,</b> <b>VILLAGE - MILUPARA, BLOCK-TAMNAR,</b> <b>DISTT. - RAIGARH (C.G.) 496 107</b>		REPORT NO. UES/TR/19-20/015790 LAB REF NO. UES/19-20/MISC/15790 DATE OF REPORT 21/03/2020 DATE OF SAMPLING 16/03/2020 DATE OF RECEIPT 17/03/2020 DATE OF ANALYSIS START: 17/03/2020 END: 21/03/2020	
SAMPLE DETAILS			
CUSTOMER SAMPLE ID	OIL (NUMBER)	CUSTOMER REF. NO. & DATE	M/PO/ENV/1820/0082, DTD.: 06.08.2019
SAMPLE TYPE	USED OIL	SAMPLE CONDITION AT RECEIPT	OK
PACKING OF SAMPLE	PLASTIC BOTTLE	SAMPLE COLLECTED BY	CLIENT
OTHER DETAILS	SEALED	QUANTITY RECEIVED	APPROX 2 LTR.

TEST REPORT				
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	RESULT
1	Total Ash	%mass	IS:1448 (Part-4):1984	0.956
2	Flash Point	°C	IS:1448 (Part-20):1998	67.0
3	Sulphur	%mass	IS:1448 (Part-33):1991	2.49
4	Density @ 25°C	Gm/ml	IS:1448 (Part-16):1990	0.894

**REMARKS: RESULTS ARE AS ABOVE**

**Terms & conditions**

- > The above analysis report refers to the particular sample retained at our end and the use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 07 days after issue of test report unless otherwise agreed with customer.

 PREPARED BY	 For ULTIMATE ENVIROLYTICAL SOLUTIONS	 AUTHORIZED SIGNATORY
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-----End of the test report-----



## Environment Expenditure 2019-20

## GARE PALMA IV/5

Sl. No	Description	CC Code	PO Number	PO Date	Amount
<b>A. Water Management</b>					
1	Water Cess	MS5340078	NA	NA	₹ 16,121.00
2	Chemical		M/PO/SPR/1920/0114	08.07.2019	₹ 470,525.00
			M/PO/SPR/1920/0107	20.06.2019	₹ 13,321.00
3	Maintenance		M/PO/SPR/1920/0169	17.10.2019	₹ 21,535.00
			M/PO/SPR/1920/0240	16.01.2020	₹ 29,236.00
4	Water Tanker - Drinking	MS5340048	M/PO/SRV/1819/0045	18.10.2018	₹ 26,004.00
		MS5340076	M/PO/SRV/1920/0044	17.06.2019	₹ 157,749.00
		MS5340076	M/PO/SRV/1920/0044	17.06.2019	₹ 172,961.00
5	Piezometer	S13CX145	M/PO/SRV/1819/0055	22.06.2018	₹ 16,524.00
6	Canal Cleaning	MS5340052	M/PO/SRV/1819/0074		₹ 21,022.00
		MS5340052	M/PO/SRV/1920/0018	18.05.2019	₹ 213,206.00
<b>Sub Total A. Water Management</b>					<b>₹ 1,158,204.00</b>
<b>B. Air Management</b>					
7	Environmental Monitoring	S5440002	M/PO/SRV/1819/0084	02.08.2017	₹ 247,512.00
		S5440002	M/PO/SRV/1920/0065	06.08.2017	₹ 458,270.00
8	Water Tanker - Sprinkling	MS5340051	M/PO/SRV/1819/0010	18.10.2018	₹ 42,603.00
		MS5340051	M/PO/SRV/1920/0015	25.07.2019	₹ 441,949.00
9	Dust suppression		M/PO/SPR/1920/0170	17.10.2019	₹ 10,733.00
<b>Sub Total B. Air Management</b>					<b>₹ 1,201,067.00</b>
<b>C. Green belt Maintenance</b>					
10	Plantation 2019-20	MS5340076	M/PO/SRV/1920/0075	31.12.2019	₹ 198,000.00
11	Garden Materials		M/PO/SPR/1920/0108	24.06.2019	₹ 12,323.00
			M/PO/SPR/1920/0099	12.06.2019	₹ 33,320.00
			M/PO/SPR/1920/0274	03.03.2020	₹ 28,715.00
12	World Environment Day 19	MS5340076	M/PO/SPR/1819/0071		₹ 23,140.00
			M/PO/SPR/1920/0099		₹ 34,070.00
<b>Sub Total C. Green belt Maintenance</b>					<b>₹ 329,568.00</b>
<b>D. Others</b>					
13	Purchase of IRS Satellite Data Products for Remote Sensing Land use pattern study		OTHERS		₹ 4,921.00
14	Automatic Weather Monitoring System	MS13CX193	M/PO/NBN/1920/0022		₹ 162,545.00
15	LED Display Board M/s Rave Innovations	MS13CX192	M/PO/NBN/1920/0023		₹ 200,364.00
16	LED Display Board M/s Rave Innovations	MS13CX192	OTHERS		₹ 11,700.00
<b>Sub Total D. Others</b>					<b>₹ 379,530.00</b>
<b>Grand Total (A+B+C+D)</b>					<b>₹ 3,068,369.00</b>



Year wise plantation detail of Gare Palma IV/5 Coal Mine						
Year	Location	No. of Tree Planted (Approx.)	Survival Rate (%)	Number of Plant Survived	Area Covered in Plantation (hectare)	Sapling Details
Upto 2015	Coal mine lease area	30000	82	24600	9.84	Neem, Mahua, , Jamun, Mango, Guava, Imli, Drumstick, Teak, Shivan / Ghamar, Sisham, Sirius, Bamboo, Peltafarm, Nilgiri etc
2016		2000	85	1700	0.68	
2017		5000	80	4000	1.6	
2018		5000	85	4250	1.7	
2019		5000	90	4500	1.8	
<b>Total</b>		<b>47000</b>	<b>84.4</b>	<b>39668</b>	<b>15.9</b>	

*Note : Gap filling of plants is a continous process*