



Letter No.: -HIL/ESR/GP-IV/4 -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 Gare Palma IV/4 Coal Mines of M/s Hindalco Industries Limited, Village – Banjikhoh, Tehsil – Tamnar, Distt. –Raigarh, Chhattisgarh – 496107.

Ref. Consent under section 25/26 of the Water (Prevention and control of pollution) Act, 1974 & under section 21 of the Air (Prevention and control of pollution) Act, 1981 no. 8669/TS/CECB/2020, Naya Raipur, dated: - 02/01/2020.

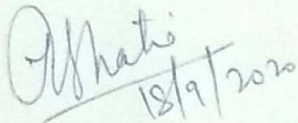
Dear Sir,

With reference to above subject we are submitting herewith the Environmental Statement Report in the prescribed format (Form - V) in respect of the Gare Palma IV/4 Coal Mine of M/s Hindalco Industries Limited, Village – Banjikhoh, Tehsil – Tamnar, Distt. –Raigarh, Chhattisgarh – 496107 for the Financial Year 2019 -20.

Receipt of the statement may kindly be acknowledged.

Thanking you,

Yours faithfully,  
For Hindalco Industries Limited,

  
18/9/2020

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" Paryavarana 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/4 Coal Mine of M/s Hindalco Industries Limited, Village – Banjikhoh, Tehsil – Tamnar, Distt. –Raigarh, Chhattisgarh – 496107
(ii)	Industry category Primary – (STC Code) Secondary – (STC Code)	Primary
(iii)	Production Capacity (Units)	Total Capacity – 1 MTPA, Coal Mining (Open cast - 0.56 MTPA and Under Ground – 0.44 MTPA)
(iv)	Year of establishment	Coal Mine vested to Hindalco Industries Limited vide order no. 104/16/2015/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/day: For the Period April' 19 to March 2020

(i)	Process	473.6
	Cooling	
(ii)	Domestic	38.6
(iii)	Irrigation & Agriculture use (Community Supply not for drinking purpose)	2801.0
	<b>Total</b>	<b>3313.2</b>

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

Sr. 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: Open Cast: 0.518 (Million Tons) Under Ground: 0.029 (Million Tons) Total Coal Production: 0.547 (Million Tons)	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	<p style="text-align: center;"><b>No Variation</b></p> <p>Mine seepage water generated from the opencast &amp; underground mines is being collected in 03 Nos. of settling ponds &amp; also being treated with chemical dosing arrangement at Banjikhoh.</p> <p>01 No. of RO plant has also been installed for supplying pure &amp; safe water in the mines for drinking purpose. Remaining treated water from settling pond no. 3 is being supplying to the nearby villages for irrigation &amp; agriculture purpose (not for drinking purpose).</p>	
2	Air (Ambient Air)	<p>The ambient air quality in &amp; around the mining lease area conforms to the standard prescribed by CPCB as per NAAQS – 2009. As per the monitoring reports submitted by CECB &amp; MoEF &amp; CC approved &amp; NABL accredited Laboratory, the concentration of ambient air quality parameters varies in the following ranges throughout the year conforming the standard-</p> <p style="text-align: center;">AAQM Report attached as <u>Annexure - 1</u></p>			
	Parameters	Pollutant Concentration (µg/m <sup>3</sup> )	Standards (NAAQS - 2009)	Variation from prescribed standards	
	2(i)	PM10	39 – 64 (Average : 56)	100	No variation
	2(ii)	PM2.5	19 – 33 (Average : 27)	60	No variation
	2(iii)	SO2	12 – 19 (Average : 16)	80	No variation
	2(iv)	NO2	20 – 28 (Average : 24)	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	0.76 KL, Used Oil (Category - 5.1)	267 Ltr. Used Oil (Category - 5.1)  25 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, Bhillai, 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	Over burden- <b>3.012 MM<sup>3</sup></b>	Over burden- <b>3.752 MM<sup>3</sup></b>
B	From pollution control facility	<b>Nil</b>	<b>Nil</b>
C	Quantity recycled or re- utilizes within the unit	<b>3.012 MM<sup>3</sup></b> (Concurrent backfilling of OB is under progress. After backfilling biological reclamation is being done)	<b>3.752 MM<sup>3</sup></b> (Concurrent backfilling of OB is under progress. After backfilling biological reclamation is being done)
(ii)	Sold	NA	NA
(iii)	Disposed	NA	NA

**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	<b>Characteristics of Used Oil (HW)</b>
	<p><b>A. Physical</b></p> <p>1. State - Liquid/ Semi Liquid.</p> <p>2. Density gm/ml - 0.860</p> <p>3. Flash Point °C - 62</p> <p><b>B Chemical</b></p> <p>1. Sulphur (% by mass) - 2.06</p> <p>2. Ash (% by mass) - 0.101</p> <p><b>Used Oil (HW Cat 5.1) &amp; 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.</b></p> <p><b>Analysis report attached as Annexure - 2</b></p>

## PART G

<p>impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production</p>	<p>We have adopted eco-friendly technologies in mining operation and measures are taken as, construction of ETP &amp; RO Plants, Fixed type &amp; Truck mounted water sprinklers, Green belt development, Vetiver grass plantation at OB dump near Patch "C" Banjikhoh, installation of Automatic ground water level recorder &amp; 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, reclamation of OB dump etc.</p>
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## PART H

<p>Additional measures/investment proposal for environmental protection abatement of pollution, prevention of pollution.</p>	<p>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.</p>
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## PART I

<p>Any other particulars for improving the quality of the environment</p>	<p>Company have planted about 82400 saplings in mines area details enclosed as Annexure - 4. Company have further plan for phase wise plantation in available open place. 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.</p> <p>Personal Protective equipment's- Like Nose mask, safety Helmet, Earmuff etc. have been provided to all workers that are working in mines.</p> <p>To avoid fugitive dust emission regular water sprinkling on haul road and other areas being done. Company is providing job specific PPEs like noise protective equipment – earplug &amp; ear muff to worker engaged in high noise area .</p>
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## Gare Palma IV/4 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> )	62	64	60	58	57	39	50	56	56	57	56	56	39	64	56
PM 2.5		30	33	30	31	30	19	24	23	24	24	24	26	19	33	27
SO <sub>2</sub>		18	18	16	19	19	15	17	14	12	12	13	14	12	19	16
NO <sub>2</sub>		23	23	23	23	24	20	21	28	26	25	26	26	20	28	24



REGD. OFF: PHASE II- ROAD 49 CHHINDI,  
 BINA ROAD NO-12, KASB NAGRI, BOPSI, C.O. - 402009  
 PH - 0771-4007777 | email - ultimateenviro@gmail.com

TO, <b>HINDALCO INDUSTRIES LIMITED,</b> <b>GARE PALMA - IV/4, COAL MINE,</b> <b>VILLAGE - BANKHETA,</b> <b>POST -MILUPARA,</b> <b>DISTT. - RAIGARH (C.G.) 496107</b>	REPORT NO	UES/09/19-20/015774
	LAB REF NO	UES/19-20/MISC/015774
	DATE OF REPORT	21/03/2020
	DATE OF SAMPLING	16/03/2020
	DATE OF ANALYSIS	17/03/2020
	DATE OF ANALYSIS REPORT	17/03/2020

SAMPLE DETAILS			
CUSTOMER SAMPLE ID	CEL (KAKHISTEWA)	CUSTOMER REF. NO. & DATE	W/D/200/180/0000, REV. 04.09.2019
SAMPLE TYPE	WOOD OIL	SAMPLE COLLECTION AT RECEIPT	OP
PACKING OF SAMPLE	PLASTIC BOTTLE	SAMPLE COLLECTED BY	CLIENT
OTHER DETAILS	ANALYS	CAPACITY SPECIFIED	APPROX 1 LTR

TEST REPORT				
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	RESULT
1	Total Ash	%/mass	IS:1449 (Part-1):1994	0.101
2	Flash Point	°C	IS:1440 (Part-2):1990	62.0
3	Sulphur	%/mass	IS:1440 (Part-3):1990	2.06
4	Density @ 25°C	GM/ML	IS:1440 (Part-10):1999	0.860

**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 any legal dispute is forbidden.
- Test samples will be retained for 07 days after issue of test report unless otherwise agreed with customer.

 PREPARED BY		 AUTHORIZED SIGNATORY
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End of the test report

**Environment Expenditure 2019-20**  
**GARE PALMA IV/4**

Sl.No	Description	Cost Center Code	PO Number	PO Date	Amount
<b>A. Water Management</b>					
1	Water Cess	NA5340078	March 19 to May 19	NA	₹ 12,090.00
2	Water Tanker - Drinking	NA5350044	N/PO/SRV/1819/0070	04.07.2018	₹ 20,502.00
		NA5350044	N/PO/SRV/1920/0018	03.05.2019	₹ 99,487.00
		NA5350003	N/PO/SRV/1920/0018	03.05.2019	₹ 47,967.00
		NA5350003	N/PO/SRV/1920/0018	03.05.2019	₹ 74,320.00
3	Ground water level monitoring	A13CX052	N/PO/SRV/1819/0047	22.06.2018	₹ 16,524.00
4	Environmental Monitoring	NA5440002	N/PO/SRV/1819/0085	07.08.2018	₹ 252,665.00
		NA5440002	N/PO/SRV/1920/0082	06.08.2019	₹ 107,708.00
		NA5440002	N/PO/SRV/1920/0082	06.08.2019	₹ 351,064.00
<b>Sub Total "A"</b>					<b>₹ 982,327.00</b>
<b>B. Air Management</b>					
5	Water Tanker - Sprinkling	NA5628S01	N/PO/SRV/1819/0117	13.11.2018	₹ 493,190.00
		NA5350003	N/PO/SRV/1920/0052	12.08.2019	₹ 146,306.00
<b>Sub Total "B"</b>					<b>₹ 639,496.00</b>
<b>C. Green belt Maintenance</b>					
6	Plantation 2019-20	NA5340076	N/PO/SRV/1920/0096	31.12.2019	₹ 237,600.00
7	Garden Materials		N/PO/SPR/1920/0060	24.06.2019	₹ 8,216.00
			N/PO/SPR/1920/0114	04.03.2020	₹ 9,450.00
8	Vetiver Grass Plantation at OB Dump, Banjikhohol		M/PO/SRV/1920/0260	11.02.2020	₹ 42,480.00
9	Green Award				₹ 43,660.00
<b>Sub Total "C"</b>					<b>₹ 341,406.00</b>
<b>Grand Total (A+B+C)</b>					<b>₹ 1,963,229.00</b>



Year wise plantation detail of Gare Palma IV/4 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/OB Dump.	53000	85.0	45050	18.0	Siris, Shisham, Yellow flametree, Kassod, Satvan, Acacia Mangium, Ganga Emli,
2016		6500	90.0	5850	2.3	Arjuna, Chirol, Gliricidia,
2017		10000	87.0	8700	3.5	Amla, Mango, guava, Neem,
2018		5000	87.0	4350	1.7	Pipal, Ficus sp., Peltafarm,
2019		6600	90.0	5940	2.4	Nilgiri, Casia Samia, Gulmohar,
2020 till March		1300	90.0	1170	0.5	Acacia Coliformis etc.
<b>Total</b>		<b>82400</b>	<b>88.2</b>	<b>72649</b>	<b>29.1</b>	

Note : Gap filling of plants is a continuous process