



Letter No.: -HIL/ESR/GP-IV/4 -21-22/340

Date: 03.09.2022

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 – Banjikhola, 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. 11357/TS/CECB/2021, Naya Raipur, dated: - 23/03/2021.

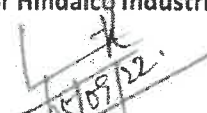
Dear Sir,

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 – Banjikhola, Tehsil – Tamnar, Distt. –Raigarh, Chhattisgarh – 496107 for the Financial Year 2021 -22.

Receipt of the statement may kindly be acknowledged.

Thanking you,

Yours faithfully,  
For Hindalco Industries Limited,

  
Govind Kumar  
(Agent- GP Mines)



Encl.: As above

- CC: 1. The Integrated Regional Office, Ministry of Environment Forests & Climate Change (MoEF & CC) Aranya Bhawan, North Block, Sector – 19, Naya Raipur, Atal Nagar, Chhattisgarh, 492002
2. The Addl. Director (Monitoring Cell), Ministry of Environment, Forest & Climate Change, Paryavaran Bhawan, Aliganj, Jorbagh Road New Delhi – 110003.
3. 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
4. Member Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, New Delhi - 110032
5. 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



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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 **2021 -22**.

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**Hindalco Industries Limited**

Gare Palma Mines ( IV/4 & IV/5), Vill & Po: Milupara , Tehsil: Tamnar Dist: Raigarh- 496107 , Chhattisgarh  
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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 -2021 to 31<sup>st</sup> March 2022.

## PART A

(i)	Name and address of the owner/occupier of the industry operation or process.	Sh. Govind Kumar (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	14.09.2021 for FY 2020- 21

## PART B

### (1) Water consumption M3/day: For the Period April 2021 to March 2022

(i)	Process	443
	Cooling	
(ii)	Domestic	
a	Inside the Mine premises	10
b	Outside the Mine Premises	17
(iii)	Irrigation & Agriculture use (Community Supply not for drinking purpose)	2166
	<b>Total</b>	<b>2636</b>

S. No.	Name of Product	Process water consumption per unit of product output	
		During the Previous financial year (2020 - 21)	During the current financial year (2021 - 22)
(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 (2020 - 21)	During the current financial year (2021 - 22)
1.	NA	Coal production for FY 2021 -22: Open Cast: 0.559 (Million Tons) Under Ground: 0.00 (Million Tons) (Coal production from Underground mine has been stopped since June 2019))	NA	NA

		<b>Total Coal Production:</b> 0.559 (Million Tons)		
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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>HIL has constructed 03 nos of Settling ponds of size 50m X 30m X 3m (each) with chemical dosing arrangement and sump with adequate capacity (for sedimentation) at Banjikhola for the mine seepage water collection, settling &amp; treatment before discharge for the agriculture purpose.</p> <p>(Photographs attached as <b><u>Annexure-1</u></b>)</p> <p>Also HIL constructed an additional settling pond of size 30m X 10m X 1.5m (01Nos) to collect whole mine seepage water generated during the mining activities from Patch "C" specially in the rainy season for proper settling of mine seepage water before discharge.</p> <p>(Photographs attached as <b><u>Annexure-2</u></b>)</p> <p>At Bankheta, HIL constructed 02 nos. of additional settling pond of size (50m X 40m X 5.0 m) for proper settling of mine seepage water generated from mining activities from Batch "B" before discharge for the agriculture purpose.</p> <p>(Photographs attached as <b><u>Annexure-3</u></b>)</p> <p>Also HIL established the Effluent Treatment plant of Capacity 50 m<sup>3</sup>/day to treat the waste water generated from the HEMM washing bay (before &amp; after maintenance of HEMM) and the treated water is being reused in the dust suppression, greenbelt development &amp; again washing of HEMM.</p> <p>(Photographs attached as <b><u>Annexure-4</u></b>)</p>



2	<b>Air (Ambient Air)</b>	The ambient air quality in 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 through out the year conforming the standard.  AAQM Report attached as <u>Annexure - 5</u>
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	Parameters	Pollutant Concentration ( $\mu\text{g}/\text{m}^3$ )	Standards (NAAQS - 2009)	Variation from prescribed standards
2(i)	PM10	41 – 56 (Average : 48)	100	No variation
2(ii)	PM2.5	21 – 29 (Average : 25)	60	No variation
2(iii)	SO2	9 – 17 (Average : 12)	80	No variation
2(iv)	NO2	19 – 28 (Average : 24)	80	No variation
2(v)	CO	0.43 – 1.0 (Average : 0.74)	4	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 (2020 - 21)	During the current financial year (2021 - 22)
a	From process	<b>Generated: 560 kg.</b> Used Oil (Category - 5.1), <b>30 kg</b> Waste/Residue containing Oil (Category - 5.2), <b>17 kg</b> Contaminated Cotton Waste/ Other Cleaning Material (Category - 33.2)	<b>Generated: 140 kg</b> of Used Oil (Category - 5.1), <b>00 kg</b> Waste/ Residue containing Oil (Category - 5.2), <b>00 kg</b> Contaminated Cotton Waste/ Other Cleaning Material (Category - 33.2)  <b>Disposed off through authorized recycler: 140 Kg.</b> of Used Oil (Category - 5.1). A submitted copy of Annual Return in Form – 4 for the FY Year 2021- 22 to RO,CECB, Raigarh under Hazardous and other waste (Management and Trans boundary Movement) Rules, 2016 and subsequent amendment for Gare Palma IV/5 is attached a <u>Annexure - 6</u> Due to small quantity of HW category 5.2 & 33.2 no recyclers wise to lift it from the mine site, so the quantity is stored in HIL Hazardous Waste storage site in a safe manner for further disposal i.e. <b>30.0 kg</b> Waste/ Residue containing Oil (Category - 5.2), <b>17.0 kg</b> Contaminated Cotton Waste/ Other Cleaning Material (Category - 33.2).
b	From pollution control facilities	<b>Nil</b>	<b>Nil</b>
c	Quantity recycled or re - utilized	Hazardous Waste generated at mine site is disposed off through CECB/CPCB authorized recycler following due standard practices.  Recycler: <b>M/s Columbia Petro Chemical, 22 industrial Area, Bhanpuri, Raipur (CG)</b>	

		HW Authorization No.: <b>10334/HSMD/HO/CECB/2020</b> dated 19/02/2020. Valid up to : <b>05.01.2025</b>
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**PART E**  
**Solid Wastes.**

S. No.	Solid Waste	Total quantity	
		Previous financial Year (2020 - 21)	Current financial year (2021 - 22)
A	From process	Over burden- <b>2.59 MM<sup>3</sup></b>	Over burden- <b>2.69 MM<sup>3</sup></b>
B	From pollution control facility	<b>Nil</b>	<b>Nil</b>
C (i)	Quantity recycled or re- utilizes within the unit	<b>2.59 MM<sup>3</sup></b> (Concurrent backfilling of OB is under progress. After backfilling biological reclamation is being done)	<b>2.69 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**

<p>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</p>	<p><b>Characteristics of Used Oil (Cat. 5.1)</b></p> <p><b>A. Physical</b></p> <ol style="list-style-type: none"> <li>State - Liquid/ Semi Liquid.</li> <li>Density@ 25 °C gm/ml - 0.724</li> <li>Flash Point °C - 50.2</li> </ol> <p><b>B Chemical</b></p> <ol style="list-style-type: none"> <li>Sulphur (%by mass) - 1.98</li> <li>Total Ash (% by mass) - 0.132</li> </ol> <p><b>Characteristics of Waste/Residue containing Oil (Cat. 5.2)</b></p> <p><b>A. Physical</b></p> <ol style="list-style-type: none"> <li>State - Liquid/ Semi Liquid.</li> <li>Density@ 25 °C gm/ml - 0.546</li> <li>Flash Point °C - 44.6</li> </ol> <p><b>B Chemical</b></p> <ol style="list-style-type: none"> <li>Sulphur (%by mass) - 0.92</li> <li>Total Ash (% by mass) - 0.122</li> </ol> <p><b>Characteristics of Contaminated Cotton Rags/Other cleaning material (Cat. 33.2)</b></p> <p><b>A. Physical</b></p> <ol style="list-style-type: none"> <li>State - Liquid/ Semi Liquid.</li> <li>Density@ 25 °C gm/ml - 0.164</li> <li>Flash Point °C - 43.6</li> </ol> <p><b>B Chemical</b></p> <ol style="list-style-type: none"> <li>Sulphur (%by mass) - 0.84</li> <li>Total Ash (% by mass) - 0.146</li> </ol> <p><b>Used Oil (HW Cat 5.1), Waste/ Residue containing Oil (Category - 5.2) &amp; Contaminated Cotton Rags/Other cleaning material (Cat. 33.2) which is generated from the HEMM/ equipment during scheduled maintenance is</b></p>
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	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 - 7
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### **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 ETP (50 m3/day) & RO Plants, Fixed type & Truck mounted water sprinklers, Green belt development, Vetiver grass plantation at OB dump near Patch "C" Banjikhoh, installation of Automatic ground water level recorder with telemetric provision, Automatic weather monitoring station with telemetric provision,, DWFM with telemetric provision, Installation of Continuous Ambient Air Quality Monitoring, Online Continuous Effluent Quality Monitoring System, 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.
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### **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-8.
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### **PART I**

Any other particulars for improving the quality of the environmentj	<p>Company have planted about 99821 saplings in mines area details enclosed as Annexure - 9. 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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# Annexure-1



SETTLING POND, NO – 1



SETTLING POND, NO – 2



SETTLING POND, NO – 3

# Annexure-2





**An additional settling pond of size 30m X 10m X 1.5m (01Nos) to collect whole mine seepage water generated during the mining activities specially for the rainy season for proper settling of mine seepage water before discharge it out site**

# Annexure-3





**02 nos of additional settling pond of size (50m X 40m X 5.0 m) for proper settling of mine seepage water generated from mining activities from Batch "B" before discharge for the agriculture purpose**

# Annexure-4



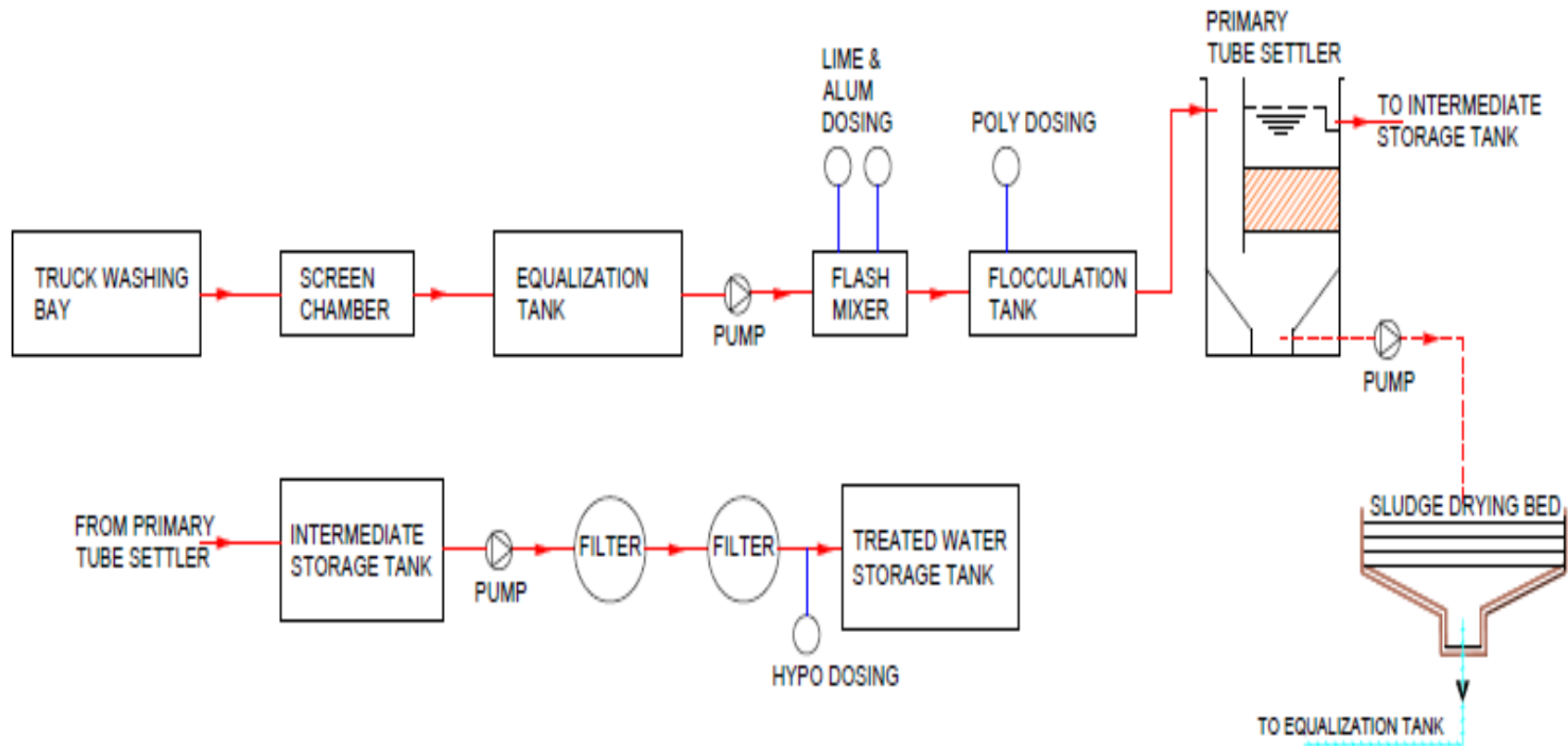


ETP of capacity 50 m<sup>3</sup>/day at Bankheta  
– GP IV/4 Coal Mine



Dumper/HEMM Washing Bay at  
Bankheta – GP IV/4 Coal Mine

# Process Flow Diagram of ETP



# Annexure-5

**Ambient Air Quality Monitoring Report of GP IV/4 Coal Mine of Hindalco Industries Limited, Raigarh**

S N	Locations	Paramet ers	Standards	2021 - 22												Averag eg
				Apr'21	May'21	Jun'21	Jul'21	Aug'21	Sep'21	Oct'21	Nov'21	Dec'21	Jan'22	Feb'22	Mar'22	
1	Near Office Area, Banjikhohol	PM <sub>10</sub>	100 µg/m <sup>3</sup>	44.0	39.0	37.0	33.8	39.0	43.5	47.0	49.0	51.0	60.0	63.9	70.1	48.1
		PM <sub>2.5</sub>	60 µg/m <sup>3</sup>	23.8	20.8	19.3	19.8	22.5	23.5	23.8	25.8	27.8	26.8	27.5	28.5	24.1
		SO <sub>2</sub>	80 µg/m <sup>3</sup>	9.0	10.5	10.5	8.5	11.8	10.8	13.4	15.3	17.3	13.8	12.8	10.8	12.0
		NO <sub>x</sub>	80µg/m <sup>3</sup>	19.8	21.8	19.8	21.0	22.8	23.8	24.3	26.3	28.3	26.0	26.9	24.8	23.8
		CO	4 mg/m <sup>3</sup>	1.0	1.0	0.9	0.9	0.5	0.5	0.6	0.7	0.8	0.7	0.7	0.6	0.7
2	ETP Area, Banjikhohol	PM <sub>10</sub>	100 µg/m <sup>3</sup>	45.8	40.0	38.0	33.8	40.3	39.0	42.0	43.8	45.8	52.3	53.8	63.5	44.8
		PM <sub>2.5</sub>	60 µg/m <sup>3</sup>	23.5	22.0	20.3	19.5	24.5	22.5	24.0	26.0	28.0	29.3	26.5	31.5	24.8
		SO <sub>2</sub>	80 µg/m <sup>3</sup>	10.0	10.8	10.5	9.5	10.5	11.8	11.1	13.0	15.0	13.8	14.0	14.3	12.0
		NO <sub>x</sub>	80µg/m <sup>3</sup>	22.0	22.3	20.3	22.8	24.0	22.8	24.3	25.8	27.3	24.5	24.3	24.3	23.7
		CO	4 mg/m <sup>3</sup>	1.0	0.9	0.9	0.9	0.6	0.5	0.5	0.6	0.7	0.7	0.6	0.6	0.7
3	Near Office area, Bankheta	PM <sub>10</sub>	100 µg/m <sup>3</sup>	53.0	44.0	42.0	38.8	44.0	48.1	50.8	52.3	54.4	58.5	61.0	69.4	51.3
		PM <sub>2.5</sub>	60 µg/m <sup>3</sup>	24.5	22.0	21.0	23.5	21.5	24.3	25.8	26.3	28.3	27.8	31.0	31.3	25.6
		SO <sub>2</sub>	80 µg/m <sup>3</sup>	12.5	11.3	10.3	11.3	10.5	12.5	12.8	14.8	16.8	12.0	10.8	11.3	12.2
		NO <sub>x</sub>	80µg/m <sup>3</sup>	23.8	22.0	20.0	21.0	21.3	23.5	24.6	25.5	27.5	24.3	23.0	24.5	23.4
		CO	4 mg/m <sup>3</sup>	1.1	1.0	1.0	1.0	0.6	0.5	0.6	0.6	0.7	0.7	0.7	0.6	0.8
4		PM <sub>10</sub>	100 µg/m <sup>3</sup>	47.8	41.3	39.3	33.5	42.9	43.6	48.8	50.8	52.8	54.0	62.0	74.5	49.3

Near Pit office, Bankheta	PM <sub>2.5</sub>	60 µg/m <sup>3</sup>	25.5	22.5	20.5	21.0	24.0	23.8	25.3	26.8	28.8	24.0	26.5	35.3	25.3
	SO <sub>2</sub>	80 µg/m <sup>3</sup>	12.3	11.3	10.0	11.3	11.8	10.5	12.5	14.0	16.0	12.3	14.5	12.9	12.4
	NO <sub>x</sub>	80µg/m <sup>3</sup>	22.0	22.0	20.3	21.5	22.8	24.3	24.6	26.5	28.5	24.0	24.8	22.5	23.6
	CO	4 mg/m <sup>3</sup>	1.0	1.0	0.9	0.9	0.8	0.5	0.6	0.8	0.8	0.6	0.6	0.7	0.8

	Parameters	Pollutant Concentration (µg/m <sup>3</sup> )	Standards (NAAQS – 2009)	Variation from prescribed standards
2(i)	PM10	41 – 56 (Average : 48)	100	No variation
2(ii)	PM2.5	21 – 29 (Average : 25)	60	No variation
2(iii)	SO <sub>2</sub>	9 – 17 (Average : 12)	80	No variation
2(iv)	NO <sub>2</sub>	19 – 28 (Average : 24)	80	No variation
2(v)	CO	0.43 – 1.0 (Average : 0.74)	4	No variation

# Annexure-6



122/2



Letter No.: HIL/GP-IV/4/H- WASTE- R-2/2022/70

22 April, 2022

The Regional Officer,  
Chhattisgarh Environment Conservation Board  
TV Tower road,  
Raigarh (CG)

**Sub. Submission of Annual Return in Form – 4 under Hazardous and Other Wastes (Management and Tran boundary Movement) Rules, 2016 and subsequent amendment for Gare Palma IV/4 Coal Mine of M/s Hindalco Industries Limited, Village – Banjikhoh, Tehsil – Tamnar, Distt. – Raigarh (CG) for the Year 2021- 22.**

Ref.: HW Authorization No. – 1497/HSMD/HO/CECB/2019, dated 10.06.2019.

Dear Sir,

We are submitting herewith the Annual Return in **Form – 4** under Hazardous and other waste (Management and Trans boundary Movement) Rules, 2016 and subsequent amendment for **Gare Palma IV/4** Coal Mine of M/s Hindalco Industries Limited, Village – Banjikhoh, Tehsil – Tamnar, Distt. – Raigarh (CG) for the **Financial Year 2021- 22.**

Thanking you,

Yours faithfully,

**Govind Kumar**  
(Agent – GP Mines)  
**Hindalco Industries Limited**

Enclosed: Form - 4 (FY - 2021- 22)



CC: Member Secretary, Chhattisgarh Environment Conservation Board, Paryavas Bhawan, Raipur Chhattisgarh.

**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 4

[See rules 6(5), 13(8), 16(6) and 20 (2)]

### FORM FOR FILING ANNUAL RETURNS

[To be submitted to State Pollution Control Board by 30<sup>th</sup> day of June of every year for the preceding period **April 2021 to March 2022**]

1. Name and address of facility: **Gare Palma IV/4 Coal Mine of M/s Hindalco Industries Limited, Village – Banjikhoh, Tehsil, – Tamnar, Distt. – Raigarh (CG).**

2. Authorisation No. and Date of issue: **HW Authorization No. – 1497/HSMD/HO/CECB/2019, dated 10.06.2019.**

3. Name of the authorised person and full address with telephone, fax number and e-mail:  
**Sh. Govind Kumar, (Agent – GP Mines)**  
**Gare Palma IV/4 Coal Mine of M/s Hindalco Industries Limited, Village – Banjikhoh, Tehsil, – Tamnar, Distt. – Raigarh (CG).**  
**Mobile No.: 9111024922**  
**E-mail – govind.kumar@adityabirla.com**

4. Production during the year (product wise), wherever applicable:

#### Coal Production for the FY 2021 - 22

Unit	Coal (Metric Tons)
Under Ground	0
Opencast	559956
<b>Total</b>	<b>559956</b>

#### Part A. To be filled by hazardous waste generators

1. Total quantity of waste generated category wise: -

Type of Hazardous Waste	Quantity (in Metric Tons per Annum)
Used Oil (HW Category – 5.1)	<b>0.14 (140 Kg)</b>
Waste / Residues containing Oil (HW Category – 5.2)	<b>Nil</b>
Contaminated Cotton Rags or Other cleaning material (33.2)	<b>Nil</b>

2. Quantity dispatched:

(i) To disposal facility

(ii) **To recycler or co-processors or pre-processor:** Waste sold to PCB Authorized Recycler i.e. M/s. Columbia Petro Chemicals, 22, Industrial Area, Bhanpuri, Distt. – Raipur (CG), dated 30/03/2022.

Type of Hazardous Waste	Quantity (in Metric Tons per Annum)
Used Oil (HW Category – 5.1)	<b>0.14 (140 Kg)</b>

(iii) Others:

3. Quantity utilised in-house, if any –

Type of Hazardous Waste	Quantity (in Metric Tons per Annum)
Used Oil (HW Category – 5.1)	Nil
Waste / Residues containing Oil (HW Category – 5.2)	Nil
Contaminated Cotton Rags or Other cleaning material (33.2)	Nil

4. Quantity in storage at the end of the year –

Type of Hazardous Waste	Quantity (in Metric Tons per Annum)
Used Oil (HW Category – 5.1)	Nil
Waste / Residues containing Oil (HW Category – 5.2)	0.030 (30 Kg)
Contaminated Cotton Rags or Other cleaning material (33.2)	0.017 (17 Kg)

*Due to small quantity of HW category 5.2 & 33.2 no recyclers wise to lift it from the mine site, so the quantity is stored in HIL Hazardous Waste storage site in a safe manner for further disposal.*

**Part B. To be filled by Treatment, storage and disposal facility operators - Not Applicable.**

1. Total quantity received –
2. Quantity in stock at the beginning of the year -
3. Quantity treated –
4. Quantity disposed in landfills as such and after treatment –
5. Quantity incinerated (if applicable) -
6. Quantity processed other than specified above -
7. Quantity in storage at the end of the year –

**Part C. To be filled by recyclers or co-processors or other users - Not Applicable.**

1. Quantity of waste received during the year –
  - (i) Domestic sources
  - (ii) imported (if applicable)
2. Quantity in stock at the beginning of the year –
3. Quantity recycled or co-processed or used –
4. Quantity of products dispatched (wherever applicable) –
5. Quantity of waste generated –
6. Quantity of waste disposed –
7. Quantity re-exported (wherever applicable)-
8. Quantity in storage at the end of the year -

Date: 22 April 2022  
Place: Raigarh

  
Signature of the Occupier

# Annexure-7





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

<b>Name &amp; Address Of The Customer</b> <b>TO,</b> <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/TR/22-23/078	
		LAB REF NO.	UES/22-23/W/0151	
		DATE OF REPORT	28/03/2022	
		DATE OF SAMPLING	29/03/2022	
		DATE OF RECEIPT	02/04/2022	
		DATE OF ANALYSIS	START:29/03/2022	END:02/04/2022
<b>SAMPLE DETAILS</b>				
CUSTOMER SAMPLE ID	OIL (BANJHIKOL)	CUSTOMER REF. NO. & DATE	N/PO/SRV/2122/0045, DTD. 24-JULY-2021	
SAMPLE TYPE	USED OIL (HW CATECORY - 5.1)	SAMPLE CONDITION AT RECEIPT	OK	
PACKING OF SAMPLE	PLASTIC BOTTLE	SAMPLE COLLECTED BY	LAB CHEMIST	
OTHER DEATAILS	SEALED	QUANTITY RECEIVED	APPROX 1 LTR.	

<b>TEST REPORT</b>				
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	RESULT
1	Total Ash	%/mass	IS:1448 (Part-4) :1984	<b>0.132</b>
2	Flash Point	°C	IS:1448 (Part-20) :1998	<b>50.2</b>
3	Sulphur	%/mass	IS:1448 (Part-33) :1991	<b>1.98</b>
4	Density@25°C	Gm/ml	IS:1448 (Part-16) :1990	<b>0.724</b>

**REMARKS: RESULTS ARE AS ABOVE**

**Terms & conditions**

- > The above analysis report refers to the particular sample received 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.

 <b>REVIEWED BY</b>	 <b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b> HINDALCO INDUSTRIES LIMITED GARE PALMA, RAIGARH (C.G.) RAIPUR (C.G.)	For <b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b>  <b>AUTHORIZED SIGNATORY</b>
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-----End of the test report-----





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

<b>Name &amp; Address Of The Customer</b> <b>TO,</b> <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/TR/22-23/079	
		LAB REF NO.	UES/22-23/W/0152	
		DATE OF REPORT	28/03/2022	
		DATE OF SAMPLING	29/03/2022	
		DATE OF RECEIPT	02/04/2022	
		DATE OF ANALYSIS	START:29/03/2022	END:02/04/2022
<b>SAMPLE DETAILS</b>				
CUSTOMER SAMPLE ID	OIL (BANJHIKHOL)	CUSTOMER REF. NO. & DATE	N/PO/SRV/2122/0045, DTD. 24-JULY-2021	
SAMPLE TYPE	WASTE / RESIDUES CONTAINING OIL (HW CATEGORY - 5.2)	SAMPLE CONDITION AT RECEIPT	OK	
PACKING OF SAMPLE	PLASTIC BOTTLE	SAMPLE COLLECTED BY	LAB CHEMIST	
OTHER DEATAILS	SEALED	QUANTITY RECEIVED	APPROX 1 LTR.	

<b>TEST REPORT</b>				
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	RESULT
1	Total Ash	%/mass	IS:1448 (Part-4):1984	0.122
2	Flash Point	°C	IS:1448 (Part-20):1998	44.6
3	Sulphur	%/mass	IS:1448 (Part-33):1991	0.92
4	Density @ 25°C	Gm/ml	IS:1448 (Part-16):1990	0.546

**REMARKS: RESULTS ARE AS ABOVE**

**Terms & conditions**

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 02/04/22 <b>REVIEWED BY</b>		For ULTIMATE ENVIROLYTICAL SOLUTIONS  02/04/22 <b>AUTHORIZED SIGNATORY</b>
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-----End of the test report-----





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

<b>Name &amp; Address Of The Customer</b> <b>TO,</b> <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>		<b>REPORT NO.</b>	UES/TR/22-23/080	
		<b>LAB REF NO.</b>	UES/22-23/W/0153	
		<b>DATE OF REPORT</b>	28/03/2022	
		<b>DATE OF SAMPLING</b>	29/03/2022	
		<b>DATE OF RECEIPT</b>	02/04/2022	
		<b>DATE OF ANALYSIS</b>	START:29/03/2022	END:02/04/2022
<b>SAMPLE DETAILS</b>				
<b>CUSTOMER SAMPLE ID</b>	OIL (BANJHIKHOL)	<b>CUSTOMER REF. NO. &amp; DATE</b>	N/PO/SRV/2122/0045, DTD. 24-JULY-2021	
<b>SAMPLE TYPE</b>	CONTAMINATED COTTN RAGS OR OTHER CLEANED MATERIAL (33.2)	<b>SAMPLE CONDITION AT RECEIPT</b>	OK	
<b>PACKING OF SAMPLE</b>	PLASTIC BOTTLE	<b>SAMPLE COLLECTED BY</b>	LAB CHEMIST	
<b>OTHER DEATAILS</b>	SEALED	<b>QUANTITY RECEIVED</b>	APPROX 1 LTR.	

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	RESULT
1	Total Ash	%/mass	IS:1448 (Part-4) :1984	0.146
2	Flash Point	°C	IS:1448 (Part-20) :1998	43.6
3	Sulphur	%/mass	IS:1448 (Part-33) :1991	0.84
4	Density @ 25°C	Gm/ml	IS:1448 (Part-16) :1990	0.164

**REMARKS: RESULTS ARE AS ABOVE**

### Terms & conditions

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- Test sample will be retained for 07 days after issue of test report unless otherwise agreed with customer.

 <b>REVIEWED BY</b>	 <b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b>	For ULTIMATE ENVIROLYTICAL SOLUTIONS  <b>AUTHORIZED SIGNATORY</b>
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-----End of the test report-----

# Annexure-8



**Gare Palma IV/4 Coal Mines**  
**M/s Hindalco Industries Limited,**  
**Environmental Expenditure Details for FY 2021-22**

<b>Particulars</b>	<b>Amount (Lakh)</b>
Water Quality Management	23.19
Air Quality Management	53.86
Plantation, Green Belt Development	6.06
Others	3.78
<b>Total</b>	<b>86.89</b>

# Annexure-9

## Hindalco Industries Limited Green Belt Development Status

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	85.00	45050	18.0	Saja,Siris, Shisham, Yellow flametree, Kassod , Satvan, Acacia Mangium, Ganga Emli, Arjuna, Chirol, Gliricidia, Amla,Mango, guava, Kathal,Neem, Pipal, Ficus sp., Peltafarm, Nilgiri, Casia Samia, Gulmohar, Acacia Coliformis,Jamun,Kachnar, Baheda, Kachnar,Mahua & Saal etc.
2016		6500	90.00	5850	2.3	
2017		10000	87.00	8700	3.5	
2018		5000	87.00	4350	1.7	
2019		6600	90.00	5940	2.4	
2020		10200	93.83	9570	3.9	
2021		8521	95.00	8094	3.2	
<b>Total</b>		<b>99821</b>	<b>87.71</b>	<b>87554</b>	<b>35.0</b>	

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

### **Green Belt Development Photographs**



























