



HIL/GP-IV/4/ENV/ESR/22-23/173

Date: 08.09.2023

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 of the Water (Prevention and control of pollution) Act, 1974 & under section 21 of the Air (Prevention and control of pollution) Act, 1981 no. 186/TS/CECB/2023, Naya Raipur, dated: - 13/04/2023.

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 **2022 -23**.

Receipt of the statement may kindly be acknowledged.

Thanking you,

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


Deepak Prasad Lenka
(Authorized Signatory – GP IV/4 & GP IV/5 Coal Mine)

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

FORM V

(See rule 14 of Environmental Protection Act, 1986)

Environmental Statement for the financial year 1st April -2022 to 31st March 2023.

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 rd 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	03.09.2022 for FY 2021- 22

PART B

(1) Water consumption M3/day: For the Period April 2022 to March 2023

(i)	Process	440
	Cooling	
(ii)	Domestic	29
(iii)	Irrigation & Agriculture use (Community Supply not for drinking purpose)	1947
	Total	2416

S. No.	Name of Product	Process water consumption per unit of product output	
		During the Previous financial year (2021 - 22)	During the current financial year (2022 - 23)
(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 2022 - 23: Open Cast: 0.55993 (Million Tons) Under Ground: 0.00 (Million Tons) (Coal production from Underground mine has been stopped since June 2019))	NA	NA

	Total Coal Production: 0.55993 (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;">No Variation</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 & treatment before discharge for the agriculture purpose.</p> <p>(Photographs attached as <u>Annexure-1</u>)</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. (Photographs attached as <u>Annexure-2</u>)</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 <u>Annexure-3</u>)</p> <p>Also HIL established the Effluent Treatment plant of Capacity 50 m³/day to treat the waste water generated from the HEMM washing bay</p>

				(before & after maintenance of HEMM) and the treated water is being reused in the dust suppression, greenbelt development & again washing of HEMM. (Photographs attached as <u>Annexure-4</u>)
2	Air (Ambient Air)	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>		

	Parameters	Pollutant Concentration ($\mu\text{g}/\text{m}^3$)	Standards (NAAQS - 2009)	Variation from prescribed standards
2(i)	PM10	53 – 65 (Average : 59)	100	No variation
2(ii)	PM2.5	23 – 32 (Average : 27)	60	No variation
2(iii)	SO2	9 – 17 (Average : 13)	80	No variation
2(iv)	NO2	20 – 29 (Average : 24)	80	No variation
2(v)	CO	0.28–0.86 (Average : 0.57)	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 (2021 - 22)	During the current financial year (2022 - 23)
a	From process	Generated: 140 kg. Used Oil (Category - 5.1), 00 kg Waste/Residue containing Oil (Category - 5.2), 00 kg Contaminated Cotton Waste/ Other Cleaning Material (Category - 33.2)	Generated: 223 kg of Used Oil (Category - 5.1), 00 kg Waste/Residue containing Oil (Category - 5.2), 00 kg Contaminated Cotton Waste/ Other Cleaning Material (Category - 33.2) A submitted copy of Annual Return in Form – 4 for the FY Year 2022- 23 to RO, CECB, Raigarh under Hazardous and other waste (Management and Trans boundary Movement) Rules, 2016 and subsequent amendment for Gare Palma IV/4 is attached a <u>Annexure – 6</u>

			Due to small quantity of HW category 5.1, 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.
b	From pollution control facilities	Nil	Nil

PART E
Solid Wastes.

S. No.	Solid Waste	Total quantity	
		Previous financial Year (2021 - 22)	Current financial year (2022 - 23)
A	From process	Over burden- 2.69 MM ³	Over burden- 6.21 MM ³
B	From pollution control facility	Nil	Nil
C (i)	Quantity recycled or re- utilizes within the unit	2.69 MM ³ (Concurrent backfilling of OB is under progress. After backfilling biological reclamation is being done)	6.21 MM ³ (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>Characteristics of Used Oil (Cat. 5.1)</p> <p>A. Physical</p> <ol style="list-style-type: none"> 1. State - Liquid/ Semi Liquid. 2. Density@ 25 °C gm/ml - 0.726 3. Flash Point °C - 50.3 <p>B Chemical</p> <ol style="list-style-type: none"> 1. Sulphur (%by mass) - 1.96 2. Total Ash (% by mass) - 0.134 <p>Characteristics of Waste/Residue containing Oil (Cat. 5.2)</p> <p>A. Physical</p> <ol style="list-style-type: none"> 1. State - Liquid/ Semi Liquid. 2. Density@ 25 °C gm/ml - 0.548 3. Flash Point °C - 44.8 <p>B Chemical</p> <ol style="list-style-type: none"> 1. Sulphur (%by mass) - 0.91 2. Total Ash (% by mass) - 0.125 <p>Characteristics of Contaminated Cotton Rags/Other cleaning material (Cat. 33.2)</p> <p>A. Physical</p> <ol style="list-style-type: none"> 1. State - Liquid/ Semi Liquid. 2. Density@ 25 °C gm/ml - 0.161 3. Flash Point °C - 43.9 <p>B Chemical</p> <ol style="list-style-type: none"> 1. Sulphur (%by mass) - 0.86 2. Total Ash (% by mass) - 0.147
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	<p>Used Oil (HW Cat 5.1), Waste/ Residue containing Oil (Category - 5.2) & Contaminated Cotton Rags/Other cleaning material (Cat. 33.2) which is generated from the HEMM/ equipment during scheduled maintenance is collected and stored securely in barrels after due segregation and kept over an impervious floor under specifically designed HW storage shed. Analysis report attached as <u>Annexure - 7</u></p>
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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 (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.</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 <u>Annexure-8</u>.</p>
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PART I

<p>Any other particulars for improving the quality of the environment</p>	<p>Company have planted about 111821 saplings in mines area details enclosed as <u>Annexure - 9</u>. 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. 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 haul road and other areas being done. Company is providing job specific PPEs like noise protective equipment – earplug & ear muff to worker engaged in high noise area .</p>
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Annexure-1

Constructed 03 Nos of Settling ponds of size 50m X 30m X 3m (each)
with chemical dosing arrangement



SETTLING POND, NO – 1



SETTLING POND, NO – 2



SETTLING POND, NO – 3

Annexure-2

Settling Pond at Patch C Banjikhoh



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

Annexure-3

Settling Pond at Patch "B" Bankheta at Gare Palma IV/4 **Coal mines**

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 Patch "B" Bankheta at Gare Palma IV/4 Coal mines before discharge for the agriculture purpose



Annexure-4

ETP of capacity 50 m³/day at Bankheta–GP IV/4 Coal Mine



Effluent Treatment Plant – 50 KLD - Bankheta

Annexure-5

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

S N	Locations	Parame ters	Standards	2022 - 23												Average	
				April	May	June	July	August	September	October	November	December	January	February	March		
1	Near Office Area, Banjikhoh	PM ₁₀	100 µg/m ³	70.8	81.3	71.5	68.8	58.8	55.5	56.6	49.1	48.6	48.6	48.3	48.6	58.9	
		PM _{2.5}	60 µg/m ³	30.5	31.0	31.0	29.8	23.5	24.0	25.9	24.4	24.0	24.0	23.9	24.3	23.9	26.3
		SO ₂	80 µg/m ³	13.5	12.3	13.3	13.4	12.8	13.1	14.6	13.1	13.3	13.3	12.6	13.5	13.6	13.3
		NO _x	80µg/m ³	26.8	24.5	25.0	24.0	24.3	25.0	26.5	24.5	24.5	24.5	24.0	24.5	24.3	24.8
		CO	4 mg/m ³	0.6	0.6	0.5	0.5	0.5	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.6
2	ETP Area, Banjikhoh	PM ₁₀	100 µg/m ³	73.8	78.5	75.5	68.5	58.5	56.0	57.8	49.3	48.6	48.0	48.6	48.6	59.3	
		PM _{2.5}	60 µg/m ³	36.3	35.8	33.8	31.5	25.0	24.5	26.0	23.5	25.0	23.6	25.5	25.5	28.0	
		SO ₂	80 µg/m ³	13.0	12.3	12.8	12.9	12.3	13.0	14.5	13.0	13.5	13.3	14.8	15.0	13.3	
		NO _x	80µg/m ³	23.4	25.0	24.8	24.0	24.5	24.3	25.5	24.0	23.1	20.4	23.1	23.1	23.8	
		CO	4 mg/m ³	0.5	0.6	0.5	0.6	0.5	0.5	0.6	0.5	0.6	0.5	0.6	0.6	0.6	0.5
3	Near Office area, Bankheta	PM ₁₀	100 µg/m ³	73.4	73.6	69.5	67.4	58.6	54.8	55.9	48.4	49.0	49.0	49.8	50.1	58.3	
		PM _{2.5}	60 µg/m ³	35.0	35.5	35.5	35.3	25.5	23.8	25.5	23.4	24.3	23.9	24.5	24.4	28.0	
		SO ₂	80 µg/m ³	10.8	12.5	13.3	13.1	11.0	12.9	14.8	13.9	14.5	14.3	14.9	14.8	13.4	
		NO _x	80µg/m ³	26.0	26.8	26.0	25.8	24.0	25.0	25.8	24.4	23.6	23.4	24.3	24.1	24.9	
		CO	4 mg/m ³	0.6	0.6	0.5	0.6	0.5	0.5	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.6
4	Near Pit office, Bankheta	PM ₁₀	100 µg/m ³	75.3	78.0	74.3	66.0	61.8	58.5	60.3	49.1	48.6	48.3	49.4	49.3	59.9	
		PM _{2.5}	60 µg/m ³	32.5	36.5	35.5	32.5	26.3	24.8	25.8	23.0	23.1	22.4	23.8	24.3	27.5	
		SO ₂	80 µg/m ³	13.8	13.0	12.5	11.3	12.3	13.3	15.3	15.0	12.0	12.0	12.6	12.5	12.9	
		NO _x	80µg/m ³	21.8	26.0	25.5	25.3	25.5	24.0	25.8	24.1	23.6	23.6	24.4	24.5	24.5	
		CO	4 mg/m ³	0.5	0.6	0.6	0.5	0.5	0.6	0.7	0.5	0.5	0.5	0.5	0.6	0.6	0.6

Annexure-6



HIL/ENV/GP-IV/4/HWM/2023/83

07th June, 2023

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 2022- 23.

Ref.: HW Authorization Letter 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 – Milupara, Tehsil – Tamnar, Distt. – Raigarh (CG) for the **Financial Year 2022- 23**.

Thanking you,

Yours faithfully,


07/06/23

Govind Kumar
Mine Agent – Gare Palma Coal Mine
Hindalco Industries Limited

Enclosed: Form - 4 (FY - 2022- 23)



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

Hindalco Industries Limited

Gare Palma Mines (IV/4 & IV/5), Villt & 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 30th day of June of every year for the preceding period April 2022 to March 2023]

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

2. Authorisation No. and Date of issue: **HW Authorization Letter 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, District – Raigarh, Chhattisgarh (C.G.)

Mobile No.: 9111024922

E-mail – govind.kumar@adityabirla.com

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

Coal Production for the 2022 – 23

Unit	Coal (Metric Tons)	
GP IV/4 Coal Mine	Underground	0
	Opencast	0.55993 (Million Tons)
Total		0.55993 (Million Tons)

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)	0.223 (223 Kg)
Waste / Residues containing Oil (HW Category – 5.2)	Nil
Contaminated Cotton Rags or Other cleaning material (33.2)	Nil

2. Quantity dispatched:

(i) To disposal facility: Nil

(ii) To recycler or co-processors or pre-processor: Nil

(iii) Others: Nil

3 Quantity utilised in-house, if any –

Type of Hazardous Waste	Quantity (in Metric Tons per Annum)
Used Oil (HW Category – 5.1)	0.110 (110 Kg)
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)	0.113 (113 Kg)
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 5.1, 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: 07.06.2023
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 1996

<i>Name & Address Of The Customer</i>		REPORT NO.	UES/TR/22-23/08872
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO.	UES/22-23/W/017232
		DATE OF SAMPLING	23/03/2023
		DATE OF RECEIPT	24/03/2023
		DATE OF REPORT	28/03/2023
		DATE OF ANALYSIS	START:24/03/2023 END:28/03/2023
SAMPLE DETAILS			
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.

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	RESULT
1	Total Ash	%/mass	IS:1448 (Part-4) :1984	0.125
2	Flash Point	°C	IS:1448 (Part-20) :1998	44.8
3	Sulphur	%/mass	IS:1448 (Part-33) :1991	0.91
4	Density @ 25°C	Gm/ml	IS:1448 (Part-16) :1990	0.548

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.

 28/03/2023 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  28/03/23 AUTHORIZED SIGNATORY
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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 1996

<i>Name & Address Of The Customer</i>		REPORT NO.	UES/TR/22-23/08873
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO.	UES/22-23/W/017233
		DATE OF SAMPLING	23/03/2023
		DATE OF RECEIPT	24/03/2023
		DATE OF REPORT	28/03/2023
		DATE OF ANALYSIS	START:24/03/2023 END:28/03/2023
SAMPLE DETAILS			
CUSTOMER SAMPLE ID	OIL (BANJHIKHOL)	CUSTOMER REF. NO. & DATE	N/PO/SRV/2122/0045, DTD. 24-JULY-2021
SAMPLE TYPE	CONTAMINATED COTTN RAGS OR OTHER CLEANED MATERIAL (33.2)	SAMPLE CONDITION AT RECEIPT	OK
PACKING OF SAMPLE	PLASTIC BOTTLE	SAMPLE COLLECTED BY	LAB CHEMIST
OTHER DEATAILS	SEALED	QUANTITY RECEIVED	APPROX 1 LTR.

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	RESULT
1	Total Ash	%/mass	IS:1448(Part-4):1984	0.147
2	Flash Point	°C	IS:1448(Part-20):1998	43.9
3	Sulphur	%/mass	IS:1448(Part-33):1991	0.86
4	Density @ 25°C	Gm/ml	IS:1448(Part-16):1990	0.161

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.

 28/03/2023 REVIEWED BY	 	For ULTIMATE ENVIROLYTICAL SOLUTIONS 28/03/23 AUTHORIZED SIGNATORY
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-----End of the test report-----

Annexure-8

Environmental Expenditure Details for FY 2022-23
(April 2022 to March 2023)

M/s Hindalco Industries Limited, Gare Palma Mines IV/4

Particulars	Amount (Lakh)
Water Quality Management	20.72
Air Quality Management	16.53
Plantation, Green Belt Development	13.47
Others	59.73
Total	110.45

Annexure-9

Plantation Details at Gare Palma IV/4 Coal Mine

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	45050	18	Saja,Siris, Shisham, Yellow flametree, Kassod , Satvan, Acacia Mangium, Ganga Emlil, 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	5850	2.3	
2017		10000	87	8700	3.5	
2018		5000	87	4350	1.7	
2019		6600	90	5940	2.4	
2020		10200	94	9570	3.9	
2021		8521	95	8094	3.2	
2022		12000	95	11400	4.6	
Total		111821	88.49	98954	39.6	

Note : Gap filling of plants is a continuous process

**Plantation Photographs at Patch “B” and Patch “C” in
OB Dump Area at GP IV/4 Coal Mine**



















Plantation Photographs in OB Dump Area at patch "B" for 2022-23









Plantation Photographs in OB Dump Area at patch "C" for 2022-23





