



Letter No.: -HIL/ESR/GP-IV/5/8-133

Date: 21.08.2018

The Regional Director,
Ministry of Environment & Forests (MoEF)
Regional Office, Western Region,
Ground floor, New Secretariat Building,
Civil Lines, Nagpur, (M.S.)

Sub.: Submission of Environmental Statement Report for the Financial Year 2017-18 of Gare
Palma IV/5 underground Coal Mine, Milupara, Tamnar, Raigarh (C.G.).

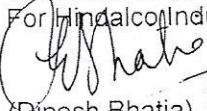
Ref. Environment Clearance No. J-11015/ 8/1998-IA.II (M) Dated: - 16th April 2015.

Sir,

With reference to subject matter on referred letter, we are submitting the Environmental Statement Report along with Environmental Monitoring report for Ambient Air, Water, during the period of 1st April -2017 to 31st March 2018.

This is for your kind information please.

Thanking you,

Yours faithfully,
For Hindalco Industries Limited,

(Dipesh-Bhatia) 21/8/18
Vice President -Mines



Encl. : Environmental Statement Report as Annexure-A.

CC To:

1. The Member Secretary, Chhattisgarh Environment Conservation Board, Housing Board Colony, Kabir Nagar, Raipur Chhattisgarh.
2. Zonal Officer, Central Pollution Control Board, Sahkar Bhawan, 3rd Floor, North T.T. Nagar, Bhopal - 462 003 (M. P.)
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)

Environmental Statement for the financial year 1st April -2016 to 31st March 2017.

PART A

(i)	Name and address of the owner/occupier of the industry operation or process.	Hindalco Industries Limited (Gare Palma-IV/5) Village – Milupara Tehsil – Tamnar, Dist – Raigarh – 496007 (C.G.)
(ii)	Industry category Primary – (STC Code) Secondary – (STC Code)	Primary.
(iii)	Production Capacity – Units -	Coal – 1.0 MTPA
(iv)	Year of establishment	Coal Mine transfer to HIL Vesting order no. 104/13/2015/NA dated 23rd March, 2015, the EUP 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	15.09.2017

PART B

(1) Water consumption M3/d

(i)	Process	1500
(ii)	Cooling	
(iii)	Domestic	96 M ³ /day
	Total	1596 M ³ /day

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

(2) Raw material consumption

No.	* Name of Raw material	Name of product	Consumption of raw material per unit	
			During the Previous financial year	During the current financial year
1.	Coal mining	Coal	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	-	-	None. The quality report on treated water is enclosed as annexure-1
2	Air (ug/m3)	-	-	None. The quality report on ambient air is enclosed as annexure-2

Supplying treated mine water to nearby villages for drinking, domestic and irrigation purposes etc.

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	During the current financial year
a	From process	5.72 Used Oil (Category -5.1)	2.6 Kl
b	From pollution control facilities		Separate Store with covered Shed storage room as per norms.

PART E

Solid Waste

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



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

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 A.Physical 1. State - Liquid. 2. Density gm/l - 0.904 3. Flash Point - 66 °C B Chemical 1. Sulphur (%by mass) - 2.57 2. Ash (%by mass) - 0.112</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>Cost expenditure on environmental management plan is enclosed as annexure-</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 water pollution control measure, water sprinkling, plantation etc. are proposed.</p>
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PART I

<p>Any other particulars for improving the quality of the environment</p>	<p>Company have planted about 32000 saplings in mines area. Company have further plan for phase wise plantation in available open place in next coming years. Company have providing safety training to all working staff in V.T. Center that is established by the company. Personal Protective equipment's like nose mask, helmet, earmuff etc. to all workers that are working in mines. Company have installed enclosures in all running DG Set to avoid noise pollution. To avoid fugitive dust emission water sprinkling on road is being done. Company have provided noise protective equipments - earplug & ear muff for all worker.</p>
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Ambient Air Quality Report

**GLOBAL ENVIRONMENT & MINING SERVICES**

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,
HOSPET - 583201, Dist., Bellary (Karnataka)

Ph : +918394 229433, 651111

e-mail : gems_hpt@yahoo.com

Website : globalmining.in

Ambient Air Quality Monitoring Report

TEST REPORT	
Report No.: GEMS/TR/17-18/1966	Date: 03.11.2017
Name and Address of Customer	Hindalco Industries Limited, Gare Plasma - IV/S, Milupara U/G Coal Mine, Village - Milupara, Block - Tamnar, Distt. - Raigarh (C.G.) 496 107.
Order / Reference:	M/PO/SRV/1718/0125, dtd. 02.08.2017
Sample Drawn By	Laboratory
Sample Received On	28.10.2017
Start of Analysis	28.10.2017
Monitoring for	Ambient Air Quality Monitoring
Sampling Location	Office Area, Milupara
Sampling Procedure	As per method reference
Sample Quantity/Packing	Filter Paper (PM10): 1X1 No., Filter Paper (PM2.5): 1X1 No. SO ₂ : 30mLX1 No. PVC Bottle, NO ₂ : 30mLX1 No. PVC Bottle Rubber Bladder: 1X1 No.

Meteorological Data/ Environmental Conditions					
Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
		Max.	Min.	Max.	Min.
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Location	Near Office	Duration of Sampling		24 Hours	
Parameter	Unit	Result	NAAQM Standard	Method Reference	
Particulate Matter size less than 10 microns (PM10)	µg/m ³	68	100	IS 5182 (Part 23); 2006 & CPCB Guidelines Vol.-I	
Particulate Matter size less than 2.5 microns (PM2.5)	µg/m ³	28	60	CPCB Guidelines Vol.-I	
Sulphur Dioxide (SO ₂)	µg/m ³	21	80	IS 5182 (Part 2); 2001, RA 2006 & CPCB Guidelines Vol.-I	
Nitrogen Dioxide (NO ₂)	µg/m ³	26	80	IS 5182 (Part 6); 2006 & CPCB Guidelines Vol.-I	
Carbon Monoxide (CO)*	mg/m ³	2.1	4	IS 5182(Part 10):1999, RA 2003	
Arsenic as As	ng/m ³	N.D.	6	EPA Method 10-3.2	
Nickel as Ni	ng/m ³	N.D.	20	EPA Method 10-3.2	
Mercury as Hg	ng/m ³	N.D.	-	EPA Method 10-5	
Cadmium as Cd	ng/m ³	N.D.	-	EPA Method 10-3.2	
Chromium as Cr	ng/m ³	N.D.	-	EPA Method 10-3.2	
Remarks: * Except CO, all results are on the basis of 24 hour sampling., N.D. - Not Detected					

For Global Environment & Mining Services

S. N. Gulhane
Chief (Laboratory)

Note:

1. The result listed refers only to the tested sample(s) and applicable parameter(s).
2. This report is not to be reproduced except in full, without written approval of the laboratory.

Waste Water Analysis

(Location: ETP treated (Outlet) sample)

GLOBAL ENVIRONMENT & MINING SERVICES
(Consulting Engineers, Mine designers, Geologist & Surveyors)3rd Main Road, Basavcswara Badavanc.
HOSPET – 583201, Dist., Bellary (Karnataka)Ph : +918394 229433, 651111
e-mail : gems_hp@yahoo.com
Website : globalmining.in

Effluent Sample Analysis Report

TEST REPORT	
Report No.: GEMS/TR/17-18/1975	Date: 03.11.2017
Name and Address of Customer	Hindalco Industries Limited, Gare Plama – IV/5, Milupara U/G Coal Mine, Village – Milupara, Block – Tamnar, Distt. – Raigarh (C.G.) 496 107.
Order /Reference:	M/PO/SRV/1718/0125, dtd. 02.08.2017
Sample Drawn By	Laboratory
Date of Sampling	16.10.2017
Sample Received On	18.10.2017
Start of Analysis	18.10.2017
End of Analysis	24.10.2017
Monitoring for	Effluent Water
Sampling Location	ETP Outlet – I
Sampling Procedure	IS:3025(Part I):1987 RA 2003; APHA 22nd Ed. 2012, 1060-B, 1-39
Sample Quantity/Packing	5 L X 1 No. PVC Can 1 L X 1 No. Glass Bottle

Sr. No.	Parameter	Unit	Result	The Environment (Protection) Rules, 1986 [SCHEDULE-VI] PART-A Inland Surface Water	Method Reference
1	Colour and Odour	Hazen & -	Absent	See 6 of Annexure-I	APHA 22 nd Ed. 2012, 2120-B, 2-6
2	Temperature	°C	26.8	Shall not exceed 5°C above the receiving water temperature	APHA 22 nd Ed. 2012, 2130-B, 2-13
3	pH	-	7.35	5.5 to 9.0	APHA 22 nd Ed. 2012, 4500-H* -B, 4-92
4	Total Residual Chlorine	mg/Lit	N.D.	1.0	APHA 22 nd Ed. 2012, 4500-Cl-G, 4 – 69
5	Total Suspended Solids	mg/Lit	24	100	APHA 22 nd Ed. 2012, 2540-D, 2-66
6	Dissolved Phosphate (as P)	mg/Lit	N.D.	5.0	APHA 22 nd Ed. 2012, 4500-P-C, 4-153
7	Fluoride (as F)	mg/Lit	1.7	2.0	APHA 22 nd Ed. 2012, 4500-F-B & D, 4-84 & 87
8	Lead (as Pb)	mg/Lit	N.D.	0.1	APHA 22 nd Ed. 2012, 3111-B, 3-18
9	Zinc (as Zn)	mg/Lit	N.D.	5.0	APHA 22 nd Ed. 2012, 3111-B, 3-18
10	Copper (as Cu)	mg/Lit	N.D.	3.0	APHA 22 nd Ed. 2012, 3111-B, 3-18
11	Cadmium (as Cd)	mg/Lit	N.D.	2.0	APHA 22 nd Ed. 2012, 3500-Cd, 3-105



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Ph : +918394 229433, 651111

e-mail : gems_hpt@yahoo.com

Website : globalmining.in

Report No. 1975 Cont....

Sr. No.	Parameter	Unit	Result	The Environment (Protection) Rules, 1986 [SCHEDULE-VI] PART-A Inland Surface Water	Method Reference
12	Mercury (as Hg)	mg/Lit	N.D.	0.01	APHA 22 nd Ed.2012,3112-B, 3-23
13	Arsenic (as As)	mg/Lit	N.D.	0.2	APHA 22 nd Ed.2012,3114-C, 3-38
14	Selenium (as Se)	mg/Lit	N.D.	0.05	APHA 22 nd Ed.2012,3114-C, 3-38
15	Total Chromium (as Cr)	mg/Lit	N.D.	2.0	APHA 22 nd Ed.2012,3500-Cr-B, 3-69
16	Chemical Oxygen Demand (COD)	mg/Lit	54	250	APHA 22 nd Ed.2012, 5520-B, 5-17
17	Biochemical Oxygen Demand (BOD)	mg/Lit	8	30	IS 3025 (Part 44):1993, RA 2003
18	Oil & Grease	mg/Lit	N.D.	10	IS 3025 (Part 39):1991, RA 2003, Ed 2.1
19	Phenolic Compounds (as C ₆ H ₅ OH)	mg/Lit	N.D.	1.0	IS 3025 (Part 43):1992, RA 2003

Remarks: N.D. - Not Detected

For Global Environment & Mining Services

S. N. Gulhane
Chief (Laboratory)



Note:

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Creative Enviro Services



Cert No.: T-2565

Accredited Organisation by National Accreditation Board for Testing and Calibration Laboratories (NABL), National Accreditation Board for Training and Education (NABET) and ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007

TEST REPORT

Name & Address of the Customer To, M/S Hindalco Industries Ltd., Gare Palma-IV/5, Mihapara U/G Coal Mines, Block - Tamarar- Raigarh	Test Report No.: 1127-1-3/CES/Lab/16-17/HR// 1145 Issue Date: 28.02.2017 Client Ref: M/PO/SRV/1617/0018 Date: 30-APR-2016
Qty: 1No. x 2 litre	Date of Collection: 28.02.2017
Method of test: APHA 22 nd edition	Date of Receipt: 24.02.2017
Packing: Plastic bottle	Period of testing: 24.02.2017 to 28.02.2017
Sample Condition at receipt: OK	Method of sampling: BIS/3025
Sample Particulars: Effluent Water	Sample tested as received: OK
Sample collected by: CES Representative	Page no.: 2 of 2

Sr. No	Test Parameters	Unit	Method No.	Requirement as per IS-10500-2012		ETP Inlet (1127-1)	ETP Outlet-1 (1127-2)	ETP Outlet-II (1127-3)
				Desirable Limit	Permissible limit			
27	* Zinc as Zn	mg/lit	3111-Zn B	5	15	<0.05	<0.05	<0.05
28	* Total Chromium	mg/lit	3500-Cr B	0.05	No relaxation	<0.05	<0.05	<0.05
29	* Cadmium as Cd	mg/lit	3111-Cd B	0.003	No relaxation	<0.05	<0.05	<0.05
30	* Lead as Pb	mg/lit	3111-Pb B	0.01	No relaxation	<0.05	<0.05	<0.05
31	* Mercury as Hg	mg/lit	3112-Hg B	0.001	No relaxation	<0.05	<0.05	<0.05
32	* Nickel as Ni	mg/lit	3111-Ni B	0.02	No relaxation	<0.05	<0.05	<0.05
33	* Arsenic as As	mg/lit	3114-As B	0.01	0.05	<0.05	<0.05	<0.05
34	* Pesticides	mg/lit	IS: EPA	-	-	ND	ND	ND
35	Sodium Na	mg/lit	3500- Na B	-	-	25.67	20.89	23.66
36	Potassium K	mg/lit	3500- K B	-	-	29.38	17.44	21.59
37	* Boron as B	mg/lit	4500-B B	0.5	1.0	<0.10	<0.10	<0.10
38	# Mineral Oil	mg/lit	IS 3025 (Part 39)	0.5	No relaxation	ND	ND	ND
39	* Selenium as Se	mg/lit	3114-Se B	0.01	No relaxation	<0.05	<0.05	<0.05
40	* Polynuclear aromatic hydrocarbons as PAH	mg/lit	APHA 6440	0.0001	No relaxation	ND	ND	ND
41	Oil & grease	mg/lit	5520 B	-	-	3.00	<2.00	<2.00

Note: - (1) The Test Parameters are marked with an # are not analysis by us, these Parameters are covered under Subcontract.
(2) Remark: - ND - Non Detectable

For Creative Enviro Services

Authorised Signatory



4, Sri Ramkunj, E-8, Bharat Nagar, Shahpura, Bhopal-462 039, Phone: 0755-4290318, Telefax: 0755-4243510, Mobile: 9425009319
Email: creativelab.bpl@gmail.com, creative.bpl@gmail.com, Websearch: www.creativeenviroservices.com

Note:

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Plantation Detail of Gare-Palma IV/5 Coal Mines

(Milupara Underground coal mine)

Sl. No.	Nos. of saplings	Plantation area in Acre	Total Numbers	Survival Rate (Approx.)
1	<i>Neem, Mahua, , Jamun, Mango, Imli, Gular, Bargad, Pipal, Ficus sp. Drumstick, Teak, Shivan/Ghamar, Sisham, Sirus, Bamboo, Peltafarm, etc.</i>	Coal mine lease area.	32000 (Approx.)	90%

Environment Expenditure 2017-18		
Sl.No	Description	Amount
A. Water Management		
1	Chemical	₹ 526,022.63
2	Maintenance	₹ 557,988.04
3	Water Treatment Plant	₹ 356,950.00
4	Others	₹ 20,779.48
		₹ 1,461,740.15
B. Air Management		
1	Environmental Monitoring	₹ 560,382.00
2	Dust suppression	₹ 215,383.57
		₹ 775,765.57
C. Green belt Maintenance		
1	PLANTATION	₹ 188,800.00
2	Electric Lawn Mower	₹ 29,524.32
3	Electric brush cutter	₹ 28,253.92
4	Fertilizers	₹ 15,839.10
		₹ 262,417.34
D. Others		
1	Painting and writing work at WTP	₹ 9,000.00
2	painting work of flower pot	₹ 3,990.00
3	Canal cleaning	₹ 109,200.00
		₹ 122,190.00
Grand Total (A+B+C+D)		₹ 2,622,113.06

CSR -Activity Wise Details FY-2017-18

M/s Hindalco Industries Limited , Gare Palma Mines IV/5	
CSR -Activity Wise Details FY-2017-18	
Focus Areas/Project Activities	Summary Costs (Lakhs)
Education	29.82
Health & Sanitation	7.79
Sustainable Livelihood	0.23
Infra-structure	40.96
Social	39.77
Total (Rs.)	118.57