

Ref No: HIL/LHD/GM (GEO)/MoEF/ 75

Date: 27.05.2019

To,  
**The Additional Principal Chief Conservator of Forest (C)**  
**Ministry of Environment, Forests and Climate Changes**  
**Regional Office (ECZ), Ranchi-834002.**

**Sub:** Compliance Report of EC conditions for Pakhar (35.12 ha) Bauxite Mining project of M/s Hindalco Industries Limited located in Lohardaga, Jharkhand for the period October'18 to March'19.

**Ref:** Environmental Clearance letter no J-11015/137/2006-IA II (M) dated 5<sup>th</sup> April 2007

Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Pakhar (35.12 ha)** Bauxite Mining project of **M/s Hindalco Industries Limited** located in Lohardaga, Jharkhand for the period October'18 to March'19.

Hope you will find the same in order.

Thanking You

Yours Sincerely  
FOR HINDALCO INDUSTRIES LIMITED

(Basudev Gangopadhyay)  
GM (Geology & Environment)

Enclosure: - As above

Copy to: Member Secretary, JSPCB, Ranchi  
RO, JSPCB, Ranchi  
CPCB, Zonal Office, Kolkata  
<mef@ori.nic.in>, <mef@nic.in>, <mef.or@nic.in>, mef.or@nic.in

Compliance of conditions laid down in Environmental Clearance

PAKHAR (35.12 Ha) BAUXITE MINES

Period: October'18- March'19

J-11015/137/2006-IA II (M) dated 5<sup>th</sup> April 2007

Sl. No	Conditions	Compliance Status
Specific Conditions		
1	All the conditions stipulated by SPCB in their NOC shall be effectively implemented.	NoC conditions are implemented when mine was operational.  Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress
2	The environmental clearance is subject to approval of the state land use Department, Government of Jharkhand for diversion of agricultural land for non-agricultural use.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.
3.	Environmental clearance is subject to grant of forestry clearance, Necessary forestry clearance under the Forest (Conservation) Act, 1980 for an area of 3.45ha forestland shall be obtained before starting mining operation in that area.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.
4	Mining shall not intersect groundwater. The mine working shall be restricted to ground water table. Prior approval of the Ministry of Environment & Forests and Central Ground Water Authority shall be obtained for mining below water table.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.
5	The project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operation.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress
6	Top soil shall be stacked properly with proper slope with adequate measures and should be used for reclamation and rehabilitation of mined out areas.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.
7	The waste generated shall be concurrently backfilled in the mined out area. There shall be no external OB dump. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forest on six monthly basis.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.  No external dump is in project area.

8	<p>Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine working. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after monsoon and maintained properly.</p> <p>Garland drain (size, gradient and length) shall be constructed for mine pit and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper setting of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.</p>	<p>Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources &amp; closure activities are under progress.</p>
9	<p>Plantation shall be raised in an area of 24.83ha including a green belt of adequate width by planting the native species around the ML area, roads, reclaimed area etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 1500 plants per ha.</p>	<p>Already 32.85 ha has been planted in and around the mine/Plateau area.</p>
10	<p>The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.</p>	<p>Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources &amp; closure activities are under progress.</p>
11	<p>Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out four times in a year – pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to MOEF, Central Ground water Authority and Regional Director Central Ground Water Board.</p>	<p>Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources &amp; closure activities are under progress.</p>
12	<p>Prior permission from the competent authority should be obtained for drawl of water from the surface water bodies.</p>	<p>Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources &amp; closure activities are under progress.</p>
13	<p>Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and transportation of mineral. The vehicles should be covered with a tarpaulin and</p>	<p>Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources &amp; closure activities are under progress.</p>

	shall not be overloaded.	
14	Drills should either be operated with dust extractors or should be equipped with water injection system.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.
15	Blasting operation should be carried out only during the daytime. Controlled blasting should be practiced. The mitigative measures for control of ground vibration and to arrest fly rocks and boulders should be implemented.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.
16	Consent to operate should be obtained from SPCB prior to start of enhanced production from the mine.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.
17	Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and wastewater generated from mining operations.	There is no effluent from mine. Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.
18	The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered fauna such as Indian Python etc. Spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. Copy of action plan may be submitted to the Ministry and its Regional Office within 3 months.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.
19	A Final Mine Closure plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forest 5 years in advance of final mine closure for approval.	Final Mine Closure plan (FMCP) approved by IBM. Copy of FMCP approval letter is attached as annexure-5.

### General Conditions.

Sl No	Conditions	Compliance Status
1	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forest	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress

2	No change in calendar plan including excavation, quantum of mineral bauxite and waste should be made.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress. Enclosed as Annexure- 4.
3	Four ambient air quality-monitoring station should be established in the core zone as well as in the buffer zone for RPM, SPM, SO <sub>2</sub> , NO <sub>x</sub> monitoring. Location of the stations should be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress. Enclosed as Annexure -1
4	Data on ambient air quality (RPM, SPM, SO <sub>2</sub> , NO <sub>x</sub> ) should be regularly submitted to the Ministry including its Regional office located at Bhubneshwar and the State Pollution Control Board / Central pollution Control Board once in six months.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress
5	Fugitive dust emission from all the sources should be controlled regularly. Water spraying arrangements on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.
6	Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operation of HEMM, etc. should be provided with ear plug / muffs.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.
7	Industrial waste water (workshops and waste water from the mine) Should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.
8	Personnel working in dusty areas should wear protective respiratory devices and they should also provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures,	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.

	if needed.	
9	A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.	Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.
10	The project authorities should inform to the Regional Office located at Bhubneshwar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	This was an operational mines hence provision of financial closure not applicable.
11	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Bhubneshwar.	Statement of actual expenses for environmental protection measure is enclosed as Annexure-2.
12	The Regional Office of this Ministry located at Bhubneshwar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	Agreed however Winning of Bauxite is closed w.e.f. 08.06.2009 due to exhaustion of resources & closure activities are under progress.
13.	The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Bhubaneshwar, Central Pollution Control Board and State Pollution Control Board.	Duly submitted.
14	A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.	Complied.
15	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Center and Collector's office / Tehsildar's Office for 30 days.	Displayed.
16	The project authorities should advertise at least in two local newspapers widely circulated, one of which locality concerned, within 7days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is	Complied. Copies of the advertisement made in the local newspapers, have already been submitted to the Regional Office during our six monthly report bearing letter no HIL/GMO(M)/ENV/142dated 23.05.2007.

<p>available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubneshwar.</p>	
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# Eco Ventures Pvt. Ltd.

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## **Mahabal Enviro Engineers Pvt. Ltd.**

At Booty, Near PHED Colony, Behind Pump House, PO – RMCC,  
District – Ranchi 834009

### **PAKHAR PLATEAU- ENVIRONMENTAL MONITORING REPORT**

**OCTOBER TO DECEMBER 2018**

**For Mahabal Enviro Engineers Pvt. Ltd.**

**Vijay Pandey**  
**SENIOR EXECUTIVE**







# Mahabal Enviro Engineers Pvt. Ltd.

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**Hindalco Industries:**

**Environmental Monitoring Report**

**OCTOBER – DECEMBER 2018**

## CONTENT

	LOCATION
	<b>AMBIENT AIR QUALITY</b>
1	Pakhar Plateau-Near Weigh Bridge
2	Pakhar Plateau- Pakhar (115.13 ha.) Quarry No. 4
3	Pakhar Plateau- Near Office
4	Pakhar Plateau- Pakhar Quarry (109.507 ha. Near Shed)
5	Pakhar Plateau Pakhar Mines(109.507 ha. Yatri Shed)
6	Pakhar Plateau- Pakhar Loading Area (109.507 ha.)





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Hindalco Industries:

Environmental Monitoring Report

OCTOBER – DECEMBER 2018

<b>Report no:</b> MEEPL/JAN0157/2018-19	<b>Date:</b> 30 <sup>th</sup> January, 2019
<b>Sample described by customer:</b> AMBIENT AIR QUALITY MONITORING	
<b>Client Name:</b> Hindalco Industries Limited	
<b>Client Address:</b> Lohardaga	
<b>Postal Code:</b> 835203	
<b>State:</b> Jharkhand	
<b>Country:</b> India	
<b>Sample type:</b> AMBIENT AIR QUALITY MONITORING	
<b>Marks on Sample:</b> Location: Pakhar Plateau-Near Weigh Bridge	
<b>Sample collected on:</b> 14.12.2018	

LOCATION / IDENTIFICATION: Pakhar Plateau-Near Weigh Bridge				
Sl. No.	PARAMETERS	UNIT	Standard Limit	Concentration
01.	Particulate Matter (size less than 10 µm) PM <sub>10</sub>	µg/m <sup>3</sup>	100	80
02.	Particulate Matter (size less than 2.5 µm) PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	39
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	4.4
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	4.5
05.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	7.2
06.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	10.7
07.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	02	0.32
08.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.03
09.	Nickel (Ni)	ng/m <sup>3</sup>	20	2.4
10.	Arsenic (As)	ng/m <sup>3</sup>	06	2.0
11.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	05	2.2
12.	Benzo (a) Pyrene	µg/m <sup>3</sup>	01	0.40

For Mahabal Enviro Engineers Pvt. Ltd.

Vijay Pandey  
SENIOR EXECUTIVE





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Hindalco Industries:

Environmental Monitoring Report

OCTOBER – DECEMBER 2018

<b>Report no:</b> MEEPL/JAN0158/2018-19	<b>Date:</b> 30 <sup>th</sup> January, 2019
<b>Sample described by customer:</b> AMBIENT AIR QUALITY MONITORING	
<b>Client Name:</b> Hindalco Industries Limited	
<b>Client Address:</b> Lohardaga	
<b>Postal Code:</b> 835203	
<b>State:</b> Jharkhand	
<b>Country:</b> India	
<b>Sample type:</b> AMBIENT AIR QUALITY MONITORING	
<b>Marks on Sample:</b> Location: Pakhar Plateau- Pakhar (115.13 ha.) Quarry No. 4	
<b>Sample collected on:</b> 14.12.2018	

LOCATION / IDENTIFICATION: Pakhar Plateau- Pakhar (115.13 ha.) Quarry No. 4				
Sl. No.	PARAMETERS	UNIT	Standard Limit	Concentration
01.	Particulate Matter (size less than 10 µm) PM <sub>10</sub>	µg/m <sup>3</sup>	100	86
02.	Particulate Matter (size less than 2.5 µm) PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	41
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	3.9
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	5.3
05.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	6.1
06.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	10.9
07.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	02	0.31
08.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.03
09.	Nickel (Ni)	ng/m <sup>3</sup>	20	2.6
10.	Arsenic (As)	ng/m <sup>3</sup>	06	2.0
11.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	05	2.1
12.	Benzo (a) Pyrene	µg/m <sup>3</sup>	01	0.40

For Mahabal Enviro Engineers Pvt. Ltd.

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Hindalco Industries:

Environmental Monitoring Report

OCTOBER – DECEMBER 2018

<b>Report no:</b> MEEPL/JAN0159/2018-19	<b>Date:</b> 30 <sup>th</sup> January, 2019
<b>Sample described by customer:</b> AMBIENT AIR QUALITY MONITORING	
<b>Client Name:</b> Hindalco Industries Limited	
<b>Client Address:</b> Lohardaga	
<b>Postal Code:</b> 835203	
<b>State:</b> Jharkhand	
<b>Country:</b> India	
<b>Sample type:</b> AMBIENT AIR QUALITY MONITORING	
<b>Marks on Sample:</b> Location: Pakhar Plateau-Near Office	
<b>Sample collected on:</b> 14.12.2018	

LOCATION / IDENTIFICATION: Pakhar Plateau-Near Office				
Sl. No.	PARAMETERS	UNIT	Standard Limit	Concentration
01.	Particulate Matter (size less than 10 µm) PM <sub>10</sub>	µg/m <sup>3</sup>	100	84
02.	Particulate Matter (size less than 2.5 µm) PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	38
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	3.4
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	4.2
05.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	5.9
06.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	11.5
07.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	02	0.28
08.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.02
09.	Nickel (Ni)	ng/m <sup>3</sup>	20	2.2
10.	Arsenic (As)	ng/m <sup>3</sup>	06	2.3
11.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	05	2.1
12.	Benzo (a) Pyrene	µg/m <sup>3</sup>	01	0.35

For Mahabal Enviro Engineers Pvt. Ltd.

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Hindalco Industries:

Environmental Monitoring Report

OCTOBER – DECEMBER 2018

<b>Report no:</b> MEEPL/JAN0160/2018-19	<b>Date:</b> 30 <sup>th</sup> January, 2019
<b>Sample described by customer:</b> AMBIENT AIR QUALITY MONITORING	
<b>Client Name:</b> Hindalco Industries Limited	
<b>Client Address:</b> Lohardaga	
<b>Postal Code:</b> 835203	
<b>State:</b> Jharkhand	
<b>Country:</b> India	
<b>Sample type:</b> AMBIENT AIR QUALITY MONITORING	
<b>Marks on Sample:</b> Location: Pakhar Plateau- Pakhar Quarry 109.507 ha. (Near Shed)	
<b>Sample collected on:</b> 15.12.2018	

LOCATION / IDENTIFICATION: Pakhar Plateau- Pakhar Quarry 109.507 ha. (Near Shed)				
Sl. No.	PARAMETERS	UNIT	Standard Limit	Concentration
01.	Particulate Matter (size less than 10 µm) PM <sub>10</sub>	µg/m <sup>3</sup>	100	72
02.	Particulate Matter (size less than 2.5 µm) PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	34
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	3.7
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	4.1
05.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	6.6
06.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	9.1
07.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	02	0.33
08.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.03
09.	Nickel (Ni)	ng/m <sup>3</sup>	20	2.7
10.	Arsenic (As)	ng/m <sup>3</sup>	06	2.0
11.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	05	2.1
12.	Benzo (a) Pyrene	µg/m <sup>3</sup>	01	0.4

For Mahabal Enviro Engineers Pvt. Ltd.

**Vijay Pandey**  
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Hindalco Industries:

Environmental Monitoring Report

OCTOBER – DECEMBER 2018

<b>Report no:</b> MEEPL/JAN0161/2018-19	<b>Date:</b> 30 <sup>th</sup> January, 2019
<b>Sample described by customer:</b> AMBIENT AIR QUALITY MONITORING	
<b>Client Name:</b> Hindalco Industries Limited	
<b>Client Address:</b> Lohardaga	
<b>Postal Code:</b> 835203	
<b>State:</b> Jharkhand	
<b>Country:</b> India	
<b>Sample type:</b> AMBIENT AIR QUALITY MONITORING	
<b>Marks on Sample:</b> Location: Pakhar Plateau- Pakhar Quarry 109.507 ha. (Yatri Shed)	
<b>Sample collected on:</b> 15.12.2018	

LOCATION / IDENTIFICATION: Pakhar Plateau- Pakhar Quarry 109.507 ha. (Yatri Shed)				
Sl. No.	PARAMETERS	UNIT	Standard Limit	Concentration
01.	Particulate Matter (size less than 10 µm) PM <sub>10</sub>	µg/m <sup>3</sup>	100	70
02.	Particulate Matter (size less than 2.5 µm) PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	36
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	2.3
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	3.9
05.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	5.3
06.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	10.8
07.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	02	0.29
08.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.03
09.	Nickel (Ni)	ng/m <sup>3</sup>	20	1.5
10.	Arsenic (As)	ng/m <sup>3</sup>	06	2.0
11.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	05	2.3
12.	Benzo (a) Pyrene	µg/m <sup>3</sup>	01	0.40

For Mahabal Enviro Engineers Pvt. Ltd.

Vijay Pandey  
SENIOR EXECUTIVE





# Mahabal Enviro Engineers Pvt. Ltd.

## Branch Office:

At Booty, Near PHED Colony, Behind Pump House, PO – RMCC, District – Ranchi 834009,  
Mobile No: +91 9431.102.102 / +91 9955.358.262,  
E-mail: [mahabalaranchi@gmail.com](mailto:mahabalaranchi@gmail.com)

Hindalco Industries:

Environmental Monitoring Report

OCTOBER – DECEMBER 2018

<b>Report no:</b> MEEPL/JAN0162/2018-19	<b>Date:</b> 30 <sup>th</sup> January, 2019
<b>Sample described by customer:</b> AMBIENT AIR QUALITY MONITORING	
<b>Client Name:</b> Hindalco Industries Limited	
<b>Client Address:</b> Lohardaga	
<b>Postal Code:</b> 835203	
<b>State:</b> Jharkhand	
<b>Country:</b> India	
<b>Sample type:</b> AMBIENT AIR QUALITY MONITORING	
<b>Marks on Sample:</b> Location: Pakhar Plateau- 109.507 ha. Loading Area.	
<b>Sample collected on:</b> 15.12.2018	

### LOCATION / IDENTIFICATION: Pakhar Plateau- 109.507 ha. Loading Area.

Sl. No.	PARAMETERS	UNIT	Standard Limit	Concentration
01.	Particulate Matter (size less than 10 µm) PM <sub>10</sub>	µg/m <sup>3</sup>	100	88
02.	Particulate Matter (size less than 2.5 µm) PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	46
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	4.5
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	5.2
05.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	7.6
06.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	10.3
07.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	02	0.41
08.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.03
09.	Nickel (Ni)	ng/m <sup>3</sup>	20	2.5
10.	Arsenic (As)	ng/m <sup>3</sup>	06	1.7
11.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	05	2.10
12.	Benzo (a) Pyrene	µg/m <sup>3</sup>	01	0.41

For Mahabal Enviro Engineers Pvt. Ltd.

Vijay Pandey  
SENIOR EXECUTIVE





# Eco Ventures Pvt. Ltd.

Regd. Office: 2/37, Sarvapriya Vihar, Near IIT Gate, New Delhi-110016

Corporate Office: 7/8 Bhaveshwar Bhuvan, Opp Portugese Church, Near Dindayal Upadhyay Garden,  
Gokhale Road (North), Dadar (West), Mumbai 400 028. Tel: +91 22 24370520 / 6672.

E: [ecoventures.mumbai@gmail.com](mailto:ecoventures.mumbai@gmail.com) / [ecoventures@eco-ventures.in](mailto:ecoventures@eco-ventures.in)

## **Mahabal Enviro Engineers Pvt. Ltd.**

At Booty, Near PHED Colony, Behind Pump House, PO – RMCC,  
District – Ranchi 834009

### **PAKHAR PLATEAU- ENVIRONMENTAL MONITORING REPORT**

**JANUARY TO MARCH 2019**

**For Mahabal Enviro Engineers Pvt. Ltd.**

**Vijay Pandey**  
**SENIOR EXECUTIVE**







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Hindalco Industries:

Environmental Monitoring Report

JANUARY – MARCH 2019

## CONTENT

	LOCATION
	<b>AMBIENT AIR QUALITY</b>
1	Pakhar Plateau-Near Weigh Bridge
2	Pakhar Plateau- Pakhar (115.13 ha.) Quarry No. 4
3	Pakhar Plateau- Near Office
4	Pakhar Plateau- Pakhar Quarry (109.507 ha. Near Shed)
5	Pakhar Plateau Pakhar Mines(109.507 ha. Yatri Shed)
6	Pakhar Plateau- Pakhar Loading Area (109.507 ha.)
	<b>NOISE LEVEL</b>
1	Pakhar Near Office.
2	Pakhar Mine (115.13 ha. ) Pakhar Plateau
3	Pakhar Mine (109.507 ha. Loading Area) Pakhar Plateau
4	Pakhar Mine (109.507 Ha Yatri Shed ) Pakhar Plateau
5	Pakhar Quarry (Near Shed)
	<b>SPOT NOISE LEVEL</b>
1	Near Poclain at Pakhar Mine (115.13 ha.)
2	Loading point near Dumper at Pakhar Mines (109.507 ha. Minerals & Minerals)





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Hindalco Industries:

Environmental Monitoring Report

JANUARY – MARCH 2019

<b>Report no:</b> MEEPL/MAY0176/2019-20	<b>Date:</b> 21 <sup>st</sup> May, 2019
<b>Sample described by customer:</b> AMBIENT AIR QUALITY MONITORING	
<b>Client Name:</b> Hindalco Industries Limited	
<b>Client Address:</b> Lohardaga	
<b>Postal Code:</b> 835203	
<b>State:</b> Jharkhand	
<b>Country:</b> India	
<b>Sample type:</b> AMBIENT AIR QUALITY MONITORING	
<b>Marks on Sample:</b> Location: Pakhar Plateau-Near Weigh Bridge	
<b>Sample collected on:</b> 08.03.2019	

LOCATION / IDENTIFICATION: Pakhar Plateau-Near Weigh Bridge				
Sl. No.	PARAMETERS	UNIT	Standard Limit	Concentration
01.	Particulate Matter (size less than 10 µm) PM <sub>10</sub>	µg/m <sup>3</sup>	100	84.3
02.	Particulate Matter (size less than 2.5 µm) PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	42.2
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	4.1
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	3.6
05.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	5.2
06.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	9.4
07.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	02	0.30
08.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.04
09.	Nickel (Ni)	ng/m <sup>3</sup>	20	2.2
10.	Arsenic (As)	ng/m <sup>3</sup>	06	1.7
11.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	05	2.0
12.	Benzo (a) Pyrene	µg/m <sup>3</sup>	01	0.25

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Hindalco Industries:

Environmental Monitoring Report

JANUARY – MARCH 2019

<b>Report no:</b> MEEPL/MAY0177/2019-20	<b>Date:</b> 21 <sup>st</sup> May, 2019
<b>Sample described by customer:</b> AMBIENT AIR QUALITY MONITORING	
<b>Client Name:</b> Hindalco Industries Limited	
<b>Client Address:</b> Lohardaga	
<b>Postal Code:</b> 835203	
<b>State:</b> Jharkhand	
<b>Country:</b> India	
<b>Sample type:</b> AMBIENT AIR QUALITY MONITORING	
<b>Marks on Sample:</b> Location: Pakhar Plateau- Pakhar (115.13 ha.) Quarry No. 4	
<b>Sample collected on:</b> 08.03.2019	

LOCATION / IDENTIFICATION: Pakhar Plateau- Pakhar (115.13 ha.) Quarry No. 4				
Sl. No.	PARAMETERS	UNIT	Standard Limit	Concentration
01.	Particulate Matter (size less than 10 µm) PM <sub>10</sub>	µg/m <sup>3</sup>	100	79.8
02.	Particulate Matter (size less than 2.5 µm) PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	37.5
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	3.1
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	4.2
05.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	4.9
06.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	8.8
07.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	02	0.34
08.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.02
09.	Nickel (Ni)	ng/m <sup>3</sup>	20	2.8
10.	Arsenic (As)	ng/m <sup>3</sup>	06	1.4
11.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	05	1.8
12.	Benzo (a) Pyrene	µg/m <sup>3</sup>	01	0.33

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Hindalco Industries:

Environmental Monitoring Report

JANUARY – MARCH 2019

<b>Report no:</b> MEEPL/MAY0178/2019-20	<b>Date:</b> 21 <sup>st</sup> May, 2019
<b>Sample described by customer:</b> AMBIENT AIR QUALITY MONITORING	
<b>Client Name:</b> Hindalco Industries Limited	
<b>Client Address:</b> Lohardaga	
<b>Postal Code:</b> 835203	
<b>State:</b> Jharkhand	
<b>Country:</b> India	
<b>Sample type:</b> AMBIENT AIR QUALITY MONITORING	
<b>Marks on Sample:</b> Location: Pakhar Plateau-Near Office	
<b>Sample collected on:</b> 08.03.2019	

LOCATION / IDENTIFICATION: Pakhar Plateau-Near Office				
Sl. No.	PARAMETERS	UNIT	Standard Limit	Concentration
01.	Particulate Matter (size less than 10 µm) PM <sub>10</sub>	µg/m <sup>3</sup>	100	88.5
02.	Particulate Matter (size less than 2.5 µm) PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	34.8
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	2.3
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	3.7
05.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	2.5
06.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	10.1
07.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	02	0.26
08.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.03
09.	Nickel (Ni)	ng/m <sup>3</sup>	20	2.0
10.	Arsenic (As)	ng/m <sup>3</sup>	06	2.5
11.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	05	1.4
12.	Benzo (a) Pyrene	µg/m <sup>3</sup>	01	0.28

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Hindalco Industries:

Environmental Monitoring Report

JANUARY – MARCH 2019

<b>Report no:</b> MEEPL/MAY0179/2019-20	<b>Date:</b> 21 <sup>st</sup> May, 2019
<b>Sample described by customer:</b> AMBIENT AIR QUALITY MONITORING	
<b>Client Name:</b> Hindalco Industries Limited	
<b>Client Address:</b> Lohardaga	
<b>Postal Code:</b> 835203	
<b>State:</b> Jharkhand	
<b>Country:</b> India	
<b>Sample type:</b> AMBIENT AIR QUALITY MONITORING	
<b>Marks on Sample:</b> Location: Pakhar Plateau- Pakhar Quarry 109.507 ha. (Near Shed)	
<b>Sample collected on:</b> 08.03.2019	

LOCATION / IDENTIFICATION: Pakhar Plateau- Pakhar Quarry 109.507 ha. (Near Shed)				
Sl. No.	PARAMETERS	UNIT	Standard Limit	Concentration
01.	Particulate Matter (size less than 10 µm) PM <sub>10</sub>	µg/m <sup>3</sup>	100	76.2
02.	Particulate Matter (size less than 2.5 µm) PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	38.3
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	3.3
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	2.7
05.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	3.0
06.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	8.9
07.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	02	0.31
08.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.04
09.	Nickel (Ni)	ng/m <sup>3</sup>	20	2.3
10.	Arsenic (As)	ng/m <sup>3</sup>	06	1.4
11.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	05	1.7
12.	Benzo (a) Pyrene	µg/m <sup>3</sup>	01	0.3

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Hindalco Industries:

Environmental Monitoring Report

JANUARY – MARCH 2019

<b>Report no:</b> MEEPL/MAY0180/2019-20	<b>Date:</b> 21 <sup>st</sup> May, 2019
<b>Sample described by customer:</b> AMBIENT AIR QUALITY MONITORING	
<b>Client Name:</b> Hindalco Industries Limited	
<b>Client Address:</b> Lohardaga	
<b>Postal Code:</b> 835203	
<b>State:</b> Jharkhand	
<b>Country:</b> India	
<b>Sample type:</b> AMBIENT AIR QUALITY MONITORING	
<b>Marks on Sample:</b> Location: Pakhar Plateau- Pakhar Quarry 109.507 ha. (Yatri Shed)	
<b>Sample collected on:</b> 08.03.2019	

LOCATION / IDENTIFICATION: Pakhar Plateau- Pakhar Quarry 109.507 ha. (Yatri Shed)				
Sl. No.	PARAMETERS	UNIT	Standard Limit	Concentration
01.	Particulate Matter (size less than 10 µm) PM <sub>10</sub>	µg/m <sup>3</sup>	100	65.4
02.	Particulate Matter (size less than 2.5 µm) PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	31.9
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	2.0
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	3.4
05.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	2.9
06.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	9.3
07.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	02	0.26
08.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.01
09.	Nickel (Ni)	ng/m <sup>3</sup>	20	1.3
10.	Arsenic (As)	ng/m <sup>3</sup>	06	1.9
11.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	05	2.2
12.	Benzo (a) Pyrene	µg/m <sup>3</sup>	01	0.21

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Hindalco Industries:

Environmental Monitoring Report

JANUARY – MARCH 2019

<b>Report no:</b> MEEPL/MAY0181/2019-20	<b>Date:</b> 21 <sup>st</sup> May, 2019
<b>Sample described by customer:</b> AMBIENT AIR QUALITY MONITORING	
<b>Client Name:</b> Hindalco Industries Limited	
<b>Client Address:</b> Lohardaga	
<b>Postal Code:</b> 835203	
<b>State:</b> Jharkhand	
<b>Country:</b> India	
<b>Sample type:</b> AMBIENT AIR QUALITY MONITORING	
<b>Marks on Sample:</b> Location: Pakhar Plateau- 109.507 ha. Loading Area.	
<b>Sample collected on:</b> 08.03.2019	

LOCATION / IDENTIFICATION: Pakhar Plateau- 109.507 ha. Loading Area.				
Sl. No.	PARAMETERS	UNIT	Standard Limit	Concentration
01.	Particulate Matter (size less than 10 µm) PM <sub>10</sub>	µg/m <sup>3</sup>	100	83.9
02.	Particulate Matter (size less than 2.5 µm) PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	49.3
03.	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	3.1
04.	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	2.9
05.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	4.3
06.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	8.5
07.	Carbon Monoxide (CO)	mg/m <sup>3</sup>	02	0.32
08.	Lead (Pb)	µg/m <sup>3</sup>	1.0	0.04
09.	Nickel (Ni)	ng/m <sup>3</sup>	20	2.4
10.	Arsenic (As)	ng/m <sup>3</sup>	06	1.5
11.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	05	2.3
12.	Benzo (a) Pyrene	µg/m <sup>3</sup>	01	0.32

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Hindalco Industries:

Environmental Monitoring Report

JANUARY – MARCH 2019

<b>Report no:</b> MEEPL/MAY0182/2019-20	<b>Date:</b> 21 <sup>st</sup> May, 2019
<b>Sample described by customer:</b> Measurement of Noise	
<b>Client Name:</b> Hindalco Industries Limited	
<b>Client Address:</b> Lohardaga	
<b>Postal Code:</b> 835203	
<b>State:</b> Jharkhand	
<b>Country:</b> India	
<b>Sample Description:</b> Measurement of Noise	
<b>Sampling Method:</b> Instrumental, using Sound level Metter	
<b>Data Collection Date:</b> 08.03.2019	

Location/Identification	Unit	Limit (day)	Result	Limit (night)	Result
Pakhar Near Office	dB (A) $L_{eq}$	75	63.7	70	56.2

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Hindalco Industries:

Environmental Monitoring Report

JANUARY – MARCH 2019

<b>Report no: MEEPL/MAY0183/2019-20</b>	<b>Date: 21<sup>st</sup> May, 2019</b>
Sample described by customer: <b>Measurement of Noise</b>	
Client Name: <b>Hindalco Industries Limited</b>	
Client Address: Lohardaga	
Postal Code: 835203	
State: Jharkhand	
Country: India	
Sample Description: <b>Measurement of Noise</b>	
Sampling Method: Instrumental, using Sound level Metter	
Data Collection Date: 08.03.2019	

Location/Identification	Unit	Limit (day)	Result	Limit (night)	Result
Pakhar Mines (115.13 ha.)	dB (A) $L_{eq}$	75	<b>61.4</b>	70	<b>54.5</b>

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JANUARY – MARCH 2019

<b>Report no: MEEPL/MAY0184/2019-20</b>	<b>Date: 21<sup>st</sup> May, 2019</b>
Sample described by customer: <b>Measurement of Noise</b>	
Client Name: <b>Hindalco Industries Limited</b>	
Client Address: Lohardaga	
Postal Code: 835203	
State: Jharkhand	
Country: India	
Sample Description: <b>Measurement of Noise</b>	
Sampling Method: Instrumental, using Sound level Metter	
Data Collection Date: 08.03.2019	

Location/Identification	Unit	Limit (day)	Result	Limit (night)	Result
Pakhar Mines (109.507 ha. Loading Area)	dB (A) $L_{eq}$	75	<b>66.0</b>	70	<b>50.9</b>

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Hindalco Industries:

Environmental Monitoring Report

JANUARY – MARCH 2019

<b>Report no: MEEPL/MAY0185/2019-20</b>	<b>Date: 21<sup>st</sup> May, 2019</b>
Sample described by customer: <b>Measurement of Noise</b>	
Client Name: Hindalco Industries Limited	
Client Address: Lohardaga	
Postal Code: 835203	
State: Jharkhand	
Country: India	
Sample Description: Measurement of Noise	
Sampling Method: Instrumental, using Sound level Metter	
Data Collection Date: 08.03.2019	

Location/Identification	Unit	Limit (day)	Result	Limit (night)	Result
Pakhar Mines (109.507 ha. of Yatri Shed)	dB (A) $L_{eq}$	75	<b>58.6</b>	70	<b>52.1</b>

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Environmental Monitoring Report

JANUARY – MARCH 2019

<b>Report no:</b> MEEPL/MAY0186/2019-20	<b>Date:</b> 21 <sup>st</sup> May, 2019
Sample described by customer: <b>Measurement of Noise</b>	
Client Name: Hindalco Industries Limited	
Client Address: Lohardaga	
Postal Code: 835203	
State: Jharkhand	
Country: India	
Sample Description: <b>Measurement of Noise</b>	
Sampling Method: Instrumental, using Sound level Metter	
Data Collection Date: 08.03.2019	

Location/Identification	Unit	Limit (day)	Result	Limit (night)	Result
Pakhar Quarry (Near Shed)	dB (A) $L_{eq}$	75	<b>60.2</b>	70	<b>48.4</b>

For Mahabal Enviro Engineers Pvt. Ltd.

Vijay Pandey  
SENIOR EXECUTIVE





# Mahabal Enviro Engineers Pvt. Ltd.

## Branch Office:

At Booty, Near PHED Colony, Behind Pump House, PO – RMCC, District – Ranchi 834009,  
Mobile No: +91 9431.102.102 / +91 9955.358.262,  
E-mail: [mahabalanranchi@gmail.com](mailto:mahabalanranchi@gmail.com)

Hindalco Industries:

Environmental Monitoring Report

JANUARY – MARCH 2019

<b>Report no:</b> MEEPL/MAY0187/2019-20	<b>Date:</b> 21 <sup>st</sup> May, 2019
Sample described by customer: <b>Measurement of Spot Noise</b>	
Client Name: Hindalco Industries Limited	
Client Address: Lohardaga	
Postal Code: 835203	
State: Jharkhand	
Country: India	
Sample Description: <b>Measurement of Spot Noise</b>	
Sampling Method: Instrumental, using Sound level Metter	
Data Collection Date: 08.03.2019	

Location/Identification	Unit	Limit (day)	Result
Near Poklen at Pakhar Mines (115.13 ha.)	dB (A) $L_{eq}$	75	<b>68.1</b>

For Mahabal Enviro Engineers Pvt. Ltd.

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<b>Client Name:</b> Hindalco Industries Limited	
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<b>Country:</b> India	
<b>Sample Description:</b> Measurement of Spot Noise	
<b>Sampling Method:</b> Instrumental, using Sound level Metter	
<b>Data Collection Date:</b> 08.03.2019	

Location/Identification	Unit	Limit (day)	Result
Pakhar Mines (109.507 ha. of Minerals & Minerals) Loading point near Dumper	dB (A) $L_{eq}$	75	69.6

For Mahabal Enviro Engineers Pvt. Ltd.

Vijay Pandey  
SENIOR EXECUTIVE



## Annexure-2

### BREAK UP THE COST OF ENVIRONMENTAL MEASURES DURING THE YEAR 2018-19

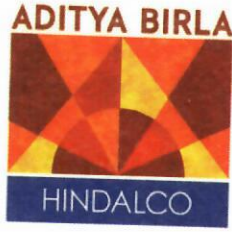
The composite cost during the year 2018-19 for environmental protection & pollution control by Jharkhand Mines division of M/s Hindalco Industries Ltd & M/s Minerals & Minerals Ltd for implementation of the suggested measures in EC at our all the operating mines in the state of Jharkhand-namely Pakhar (115,13 Ha), Pakhar (15.58 Ha), Pakhar (109.507 Ha), Pakhar (8.09 Ha), Pakhar (35.12Ha), Serengdag (140.06 Ha), Serengdag (155.81 Ha), Jalim & Sanai (12.14 Ha), Gurdari (584.19 Ha), Amtipani (190.95 Ha), Kujam I (80.97 Ha) Kujam II (157.38 Ha), Bagru (75.41 Ha), Hisri New (14.55 Ha), Chiro kukud (152.57 ha), Orsa pat (196.36 Ha), Bhusar (65.31 Ha) and Bimarla Bauxite Mines (134.52 Ha).

S. No	Description	Budget (in Rupees) FY 2018-19	Actual (in Rupees) FY 2018-19 (from April'18 to Sep'18)	Actual (in Rupees) FY 2018-19 (from October'18 to March'19)
1	Pollution Control & Environment monitoring	15,21,000	8,82,300.00	8,43,969.95
2	Reclamation/ Back filing & Rehabilitation**	2,92,00,000	1,49,78,461.39	2,94,16,735.87
3	Green belt, Plantation & Water spraying arrangement	45,00,256	25,38,864.95	47,17,862.62
4	Rural Development	2,60,25,236	1,32,42,312.42	6,26,47,100.13

\*\*Part of OB removed cost.



(Basudev Gangopadhyay)  
Convenor (Quality & Environment)



Annexure - 3

Date: 10.01.19

### Office Order

Environmental Cell has been re-constituted at Pakhar Bauxite Mines (Area 35.12 Ha) comprising below mentioned team members. The team will ensure compliance of Environment Act, Regulation & Rule in respect of the said mines of Hindalco Industries Limited.

1. Mr. Kiran Shankar Singh- Manager (Coordinator)
2. Mr. Ramnath Bhagat (Mining Mate)-Member
3. Mr. Gaurang Agrawal (Mining Engineer) - Member

Basudev Gangopadhyay  
Convenor (Quality & Environment)



## Annexure 4

### Production, Mined Out, Back Filled and Over Burden removal from April'18 to March'19

S No	Name of the Mines	Mining lease area (ha)	Production Capacity (MT)*	Lease Period*	Production (MT)	Mined out area (ha)	Back filled area (ha)	Over burden (Cu.M)
1	Bagru bauxite Mine	75.41	85000	22.01.1974 to 31.03.2030	Mining operation is stopped due to legal problem			
2	Bhusar Bauxite Mine	65.31	280000	11.07.1981 to 31.03.2030	190078	1.638	5.19	335972
3	Hisri (New) Bauxite Mine	14.55	100000	19.07.1981 to 31.03.2030	90674	1.366	0.457	46704
4	Kujam - I Bauxite Mine	80.87	150000	13.03.2006 to 12.03.2056	131115	4.36	4.76	156020.91
5	Kujam - II Bauxite Mine	157.38	300000	24.03.2006 to 23.03.2056	260995	14.29	23.08	499904.89
6	Amtipani Bauxite Mine	190.95	150000	13.03.2006 to 12.03.2056	144670	8.38	3.91	276790.63
7	Gurdari Bauxite Mine	584.19	325000	23.03.1985 to 22.03.2035	322340	13.57	13.68	649920.067
8	Shrengdag A Bauxite Mine	155.81	260000	16.10.1974 to 31.03.2030	255430	3.65	3.20	655460
9	Shrengdag B Bauxite Mine	140.07	100000	04.10.1978 to 31.03.2030	73190	1.04	0.45	159667.5
10	Jalim& Sanai Bauxite Mine	12.14	50000	16.10.1974 to 31.03.2030	40395	1.04	0.45	42125

## Annexure 4

11	Orsapat Bauxite Mine	196.36	200000	17.07.1986 to 16.07.2036	1470	0.00	0.00	2185.422	
12	Chiro Kukud bauxite Mine	152.57	100000	29.01.1985 to 28.01.2035	1970	0.113	0.00	13168.924	
13	Pakhar (8.09)	8.09	80000	16.05.1973 to 31.03.2030	Nil	Nil	Nil	Nil	
14	Pakhar (35.12)	35.12	200000	17.04.1975 to 31.03.2030	Nil	Nil	Nil	Nil	
15	Pakhar (115.13)	115.13	300000	19.07.1996 to 31.03.2030	294000	3.31	2.43	521370	
<b>Minerals &amp; Minerals Limited</b>									
16	Pakhar (15.58)	15.58	60000	28.04.1965 to 31.03.2030	35500	0.65	0.92	93116	
17	Pakhar (109.507)	109.507	280000	26.07.2008 to 25.07.2058	247130	2.37	2.82	378979	
18	Birmarla Bauxite Mine	134.526	300000	18.07.2009 to 17.07.2059	185715	8.09	8.65	409391.00	

\*Static information about the mines included in the above table



**Basudev Gangopadhyay**  
Convenor (Quality & Environment)



GOVERNMENT OF INDIA  
MINISTRY OF MINES  
INDIAN BUREAU OF MINES  
OFFICE OF THE REGIONAL CONTROLLER OF MINES

Telephone: (0651) 2242889  
(0651) 2242903  
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E-mail: ro.ranchi@ibm.gov.in

No.: RAN/LOH/BX/FMCP-02/2014-15.

318-B, Road No.- 3,  
Ashok Nagar,  
Ranchi - 834 002,  
Date: 23/04/2015

To: ✓ Shri A. K. Agarwal,  
Director cum Nominated Owner  
M/s HINDALCO Industries Ltd.,  
Court Road, Lohardaga - 835 302 (Jharkhand).

Sub: **Approval of Final Mine Closure Plan in respect of PAKHAR Bauxite Mines of M/s HINDALCO Industries Ltd. over an area of 38.95 hectares in village-Pakhar, Lohardaga district of Jharkhand State submitted under Rule 23C of MCDR, 1988.**

Ref : Your A.G.M. (Geology) letters no. HIL/LHD/BX/IBM/245 Dated 02/08/2014

Your R.Q.P. letter nos. NIL, dated.03/11/2014 & 26/12/2014

This office letter no. रांची/लोहरदगा/बाक्साइट/एफ.एम.सी पी.-02/2014-15,दिनांक:26/09/2014

Sir,

In exercise of the powers conferred by the sub-rule 2 of Rule 23C of Mineral Conservation & Development Rules, 1988; I hereby **approve** the above said Final Mine Closure Plan in respect of PAKHAR Bauxite mines of M/s HINDALCO Industries Ltd. over an area of 38.95 hectares in village-Pakhar, Lohardaga district of Jharkhand State, submitted under Rule 23C of MCDR, 1988. This approval is subject to the following conditions: -

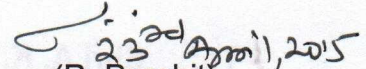
- (i) that the Final Mine Closure Plan is approved without prejudice to any other laws applicable to the mine/lease area from time to time whether made by the Central Government, State Government or any other Authority.
- (ii) that this approval of the Final Mine Closure Plan does not, in any way, imply the approval of the Government in terms of any other provisions of the Mines & Minerals (Development & Regulation) Act, 1957 or the Mineral Concession Rules, 1960 and any other laws including Forest (Conservation) Act, 1980, Environment (Protection) Act, 1986 and the rules made there under.
- (iii) that the Final Mine Closure Plan is approved without prejudice to any order or direction from any court of competent jurisdiction.
- (iv) that the Regional Office, Indian Bureau of Mines, Ranchi shall be informed after completion of activities of final mine closure as per proposal of the Final Mine Closure Plan.
- (v) that the Yearly report as required under Rule 23E(2) of MCDR, 1988 setting forth the extent of protection and rehabilitation works carried out as envisaged in the approved final mine closure plan and if there is any deviations, reasons thereof shall be submitted before 1<sup>st</sup> July of every year to the Regional office, Indian Bureau of Mines, Ranchi.

No.: RAN/LOH/BX/FMCP-02/2014-15.

- (iv) The financial assurance submitted for Rs. 2,74,000/- (Two lacs seventy four thousand only) is valid up to 31/03/2016. A new bank guarantee is to be submitted on or before its expiry i.e. 31/03/2016, if the rehabilitation proposal not completed by the time.

Encl.: One copy of approved  
Final Mine Closure Plan.


Yours faithfully

  
(R. Purohit) 23rd April, 2015

Regional Controller of Mines

Copy forwarded for information to: -

1. **The Director (Mines),**  
Directorate of Mines and Geology,  
Government of Jharkhand,  
Nepal House Area, Doranda,  
Ranchi - 834 002. (Jharkhand), along with a copy of approved Final Mine Closure Plan. **It is requested to ensure that the determination of aforesaid lease is not accepted unless and until a certificate issued by the Indian Bureau of Mines under Rule 29A (2) of Mineral Concession Rules, 1960 to the effect that protective, reclamation and rehabilitative works as envisaged in the approved Final Mine Closure Plan are carried out.**
2. **The Director of Mines Safety**  
Ranchi Region  
CMPDIL-Campus  
3<sup>rd</sup> Floor, Old Building  
Kanke Road, Ranchi-834008  
along with a copy of approved Final Mine Closure Plan.
3. **Shri P.K. Sen, RQP,**  
Kali Mandir Road,  
Doranda, Ranchi - 834 002.

  
(R. Purohit)  
Regional Controller of Mines