

HIL/LHD/ENV/MoEF/

Date: 27.11.2019

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 April'19 to September'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 April'19 to September'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  
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**Compliance of conditions laid down in Environmental Clearance**  
**PAKHAR (35.12 Ha) BAUXITE MINES**  
**Period: April'19- September'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.<br><br>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 & | Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.<br><br>No external dump is in project area.                     |

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|    | Forest on six monthly basis.   |   |
| 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> | Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress. |
| 9  | 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.   | Already 32.85 ha has been planted in and around the mine/Plateau area.  |
| 10 | 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.  | Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress. |
| 11 | 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.   | Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress. |

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| 12 | Prior permission from the competent authority should be obtained for drawl of water from the surface water bodies.  | Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.                                 |
| 13 | 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 shall not be overloaded.   | Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.                                 |
| 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.                          |

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| 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.<br>Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed. | Winning of Bauxite is closed w.e.f 08.06.2009 due to exhaustion of resources & closure activities are under progress.                 |
| 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  | Duly submitted.   |

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|    | Office, Bhubaneshwar, Central Pollution Control Board and State Pollution Control Board.   |  |
| 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 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. | 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. |

## Annexure-2

### BREAK UP THE COST OF ENVIRONMENTAL MEASURES DURING THE YEAR 2019-20

The composite cost during the year 2019-20 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).

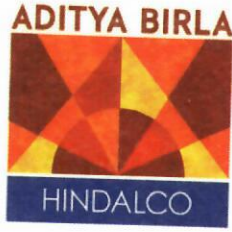
| S. No | Description   | Budget (in Rupees)<br>FY 2019-20 | Actual (in Rupees)<br>FY 2019-20<br>(from April'19 to Sep'19) |
|-------|---|----------------------------------|---|
| 1     | Pollution Control & Environment monitoring          | 3,351,809.00                     | 1,650,803.00  |
| 2     | Reclamation/ Back filing & Rehabilitation**         | 25,300,000.00                    | 8,571,756.00  |
| 3     | Green belt, Plantation & Water spraying arrangement | 4,725,854.00                     | 2,360,877.00  |
| 4     | Rural Development                                   | 22,035,865.00                    | 9,848,659.98  |

\*\*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

| <b>Production, Mined Out, Back Filled and Over Burden removal from April'19 to September'19</b> |                          |                        |                           |                          |   |                     |                       |                    |  |  |
|---|--------------------------|------------------------|---------------------------|--------------------------|---|---------------------|-----------------------|--------------------|--|--|
| 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 | Mine is not in operation since November 2013. |                     |                       |                    |  |  |
| 2   | Bhusar Bauxite Mine      | 65.31                  | 280000                    | 11.07.1981 to 31.03.2030 | 4895  | 0.07                | 0.00                  | 77442.60           |  |  |
| 3   | Hisri (New) Bauxite Mine | 14.55                  | 100000                    | 19.07.1981 to 31.03.2030 | 7972  | 0.06                | 0.00                  | 11629.94           |  |  |
| 4   | Kujam - I Bauxite Mine   | 80.87                  | 150000                    | 13.03.2006 to 12.03.2056 | NIL   | NIL                 | 0.67                  | 21974.96           |  |  |
| 5   | Kujam - II Bauxite Mine  | 157.38                 | 300000                    | 24.03.2006 to 23.03.2056 | NIL   | NIL                 | 1.20                  | 53614.90           |  |  |
| 6   | Amtipani Bauxite Mine    | 190.95                 | 150000                    | 13.03.2006 to 12.03.2056 | NIL   | NIL                 | 1.00                  | 107763.230         |  |  |
| 7   | Gurdari Bauxite Mine     | 584.19                 | 325000                    | 23.03.1985 to 22.03.2035 | 153475  | 6.95                | 4.67                  | 111211.184         |  |  |
| 8   | Shrengdag A Bauxite Mine | 155.81                 | 260000                    | 16.10.1974 to 31.03.2030 | 147045  | 5.00                | 7.00                  | 325000             |  |  |
| 9   | Shrengdag B Bauxite Mine | 140.07                 | 100000                    | 04.10.1978 to 31.03.2030 | NIL   | NIL                 | NIL                   | NIL                |  |  |
| 10  | Jalim&Sanai Bauxite Mine | 12.14                  | 50000                     | 16.10.1974 to 31.03.2030 | 28545   | 0.39                | 0.33                  | 16000              |  |  |

## Annexure 4

|  |                          |         |        |                                |        |      |      |           |  |
|--|--------------------------|---------|--------|--------------------------------|--------|------|------|-----------|--|
| 11                                     | Orsapat Bauxite Mine     | 196.36  | 200000 | 17.07.1986<br>to<br>16.07.2036 | NIL    | NIL  | NIL  | NIL       |  |
| 12                                     | Chiro Kukud bauxite Mine | 152.57  | 100000 | 29.01.1985<br>to<br>28.01.2035 | NIL    | NIL  | NIL  | NIL       |  |
| 13                                     | Pakhhar (8.09)           | 8.09    | 80000  | 16.05.1973<br>to<br>31.03.2030 | NIL    | NIL  | NIL  | NIL       |  |
| 14                                     | Pakhhar (35.12)          | 35.12   | 200000 | 17.04.1975<br>to<br>31.03.2030 | NIL    | NIL  | NIL  | NIL       |  |
| 15                                     | Pakhhar (115.13)         | 115.13  | 300000 | 19.07.1996<br>to<br>31.03.2030 | 25000  | 0.35 | 0.58 | 72808.76  |  |
| <b>Minerals &amp; Minerals Limited</b> |                          |         |        |                                |        |      |      |           |  |
| 16                                     | Pakhhar (15.58)          | 15.58   | 60000  | 28.04.1965<br>to<br>31.03.2030 | 49800  | 0.4  | 0.20 | 48359.23  |  |
| 17                                     | Pakhhar (109.507)        | 109.507 | 280000 | 26.07.2008<br>to<br>25.07.2058 | 118700 | 1.00 | 2.04 | 162256    |  |
| 18                                     | Bimarla Bauxite Mine     | 134.526 | 300000 | 18.07.2009<br>to<br>17.07.2059 | 87320  | 4.33 | 3.10 | 241367.05 |  |

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

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