



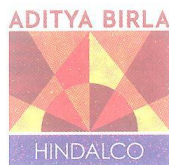
**Hindalco Industries Limited**  
**(Unit – Muri Works)**



**Environment Clearance Compliance Report**  
**Period: October 2017 to March 2018**

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Hindalco Industries Limited (Unit – Muri Works)  
P.O.: Chotamuri, Distt. Ranchi – 835101, Jharkhand – India



No. Hindalco/Env/2018/23

14<sup>th</sup> May, 2018

To,  
✓ **The In-charge, Regional Office (Eastern-Central Zone),**  
Ministry of Environment, Forest and Climate Change,  
Bungalow No. A-2, Shyamali Colony, Ranchi – 834002

**Sub.: Submission of environment clearance compliance report for the period from October 2017 to March 2018**

**Ref.: MoEF&CC environment clearance letter No. J-11011/131/2005-IA.II (I) dated 20.09.05**

Dear Sir,

This is with reference to the aforesaid subject regarding environment clearance granted by your esteemed office vide letter No. J-11011/131/2005-IA.II (I) dated 20.09.2005.

In this regard, hereby we are pleased to submitting six monthly environment clearance compliance report for the period from **October 2017 to March 2018** for our Hindalco Industries Limited, Muri Works.

We are also sending you softcopy of report through e-mail address: [ro.ranchi-mef@gov.in](mailto:ro.ranchi-mef@gov.in) for your ready reference please.

Thanking You,

Your's Faithfully  
For & On Behalf of  
**Hindalco Industries Limited - Muri Works**

*Prasanta Bose*  
*Prasanta Bose*  
**(Prasanta Bose)**  
Technical Head

**Encl.:** EC compliance report

Copy to:

1. **The Director**, Ministry of Environment, Forest and Climate Change, Paryavaran Bhawan, CGO Complex, Lodi Road, New Delhi-110003
2. **The Member Secretary**, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032
3. **The In-charge**, Central Pollution Control Board, (Eastern Zonal Office), Southern Conclave, Block 502, 5<sup>th</sup> and 6<sup>th</sup> Floors, 1582 Rajdanga Main Road, Kolkata-700107
4. **The Member Secretary**, Jharkhand Pollution Control Board, T.A. Bhawan, HEC Complex, Dhurwa, Ranchi
5. **The Regional Officer**, Jharkhand State Pollution Control Board, Industrial Area, Tupudana, Ranchi-834003

Hindalco Industries Limited

Muri Works: P.O. Chotamuri - 835 101, Dist. - Ranchi, Jharkhand, India

T: +91 6522 244233, 9708036910 | E: hindalco.muri@adityabirla.com | W: www.hindalco.com

Registered Office: Century Bhavan, 3rd Floor, Dr. Annie Besant Road, Worli, Mumbai 400 030, India | T: +91 22 6662 6666

Corporate ID No.: L27020MH1958PLC011238

**A. SPECIFIC CONDITIONS**

Sr. No	Condition	Compliance Status
(i)	<p>The gaseous emissions from various units shall conform to the standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry, its size and location. At no time the emission level should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency. Ambient Air Quality data should be regularly monitored and records maintained and report submitted to the Ministry /CPCB/Jharkhand State Pollution Control board once in six months.</p>	<p>Pollution control equipments have installed to conform the prescribed emission standard. Online Continuous Emission Monitoring System (OCEMS) have installed and attached with Refinery &amp; Power Plant Boiler stacks to online continuous emission monitoring and uninterruptedly report being transferred to the CPCB &amp; JSPCB through dedicated lease line server. Ambient air quality regularly monitored and report submitted to the MOEF&amp;CC, CPCB &amp; JSPCB and its Regional Offices with six monthly EC compliance report. <b>Ref. Annexure-1.</b></p>
(ii)	<p>There shall be no discharge of process effluent. As reflected in the EIA/EMP report, the process waste water generation shall increase from 528m<sup>3</sup>/d to 5092m<sup>3</sup>/d. About 802m<sup>3</sup>/d of waste water will be recycled. Remaining 4290m<sup>3</sup>/d will be recycled back to the process after treatment in the ETP. In addition, efforts shall be made to re-use wastewater from the existing plant. The domestic wastewater shall be treated in STP to meet prescribed standards. The company shall undertake water conservation measures by recycling of power plant blow downs and domestic effluent in the refinery process. The storm water management shall be by use of water for sprinkling, recycling to process, ash moistening and plant keep up.</p>	<p>There is no any process effluent discharged and after treatment in ETP it is being recycled and reuse in the process. The domestic wastewater generated from residential colony is after treatment in STP being used for the plantation purpose. The quality of effluent and domestic wastewater is being maintained as per the prescribed standards as well as necessary initiatives have been taken towards water conservation.</p>
(iii)	<p>In plant control measures for checking fugitive emission from spillage/raw materials handling shall be provided. Water sprinklers shall be provided to control the fugitive emissions from the active red mud disposal areas and ash coverage in inactive areas.</p>	<p>In plant to checking the fugitive emissions, dust suppression system are installed in bauxite handling area and coal storage yard.</p> <p>To control the fugitive emission from RMP following systems are already in place:</p> <ul style="list-style-type: none"> <li>▪ Dust suppression system with water sprinklers along the road and periphery of RMP.</li> <li>▪ Dedicated water tanker in RMP area and road to suppress dust.</li> <li>▪ Green belt developed in by growing</li> </ul>

**EC Compliance Status Report****Ref. No. J-11011/131/2005-IA.II (I) dated 20.09.05**

		grass on RMP by hydro-seeding technology (from USA).
(iv)	The particulate emissions from the calciners shall be controlled by installation of electrostatic precipitator. The particulate emissions shall not exceed 50 mg/Nm <sup>3</sup> . The company shall install bag filters to control the emissions from the alumina kiln. All the boiler stacks shall be provided with stack height as per the CPCB guidelines. The boiler and Calciner stacks shall be equipped with continuous monitoring device to check SPM emission levels.	Pollution control equipment has installed and attached with Calciner & Boiler stacks to control the emission as per the prescribed standard. The height of the stack provided as per the CPCB guidelines. The Boiler & Calciner stacks equipped with the continuous monitoring devices to check the PM level and real time data being transferred to the CPCB & JSPCB server.
(v)	The company shall adopt dry disposal system for red mud disposal and shall provide Geo membrane lining in red mud storage area. The ground water quality shall be monitored at various depths around the red mud ponds and action plan in this regard shall be submitted to the Ministry. The company shall rehabilitate the abandoned red mud pond areas with development of green cover.	Dry mud disposal system is being adopted for Red Mud filtration by installing New Pressure Filter Technology. In the RMP area, a well designed system is installed to take care of any Leachate, seepage and runoff water. Pre & Post Monsoon Hydrological study is being done. In the year 2017 pre & post monsoon hydrological study was conducted by ISM, Dhanbad for ground water sources in Muri and as per the report all the parameters are well within the limit. Abandoned red mud pond has rehabilitated and covered by development of green cover.
(vi)	As and when the new pond for red mud disposal is to be constructed, it shall be lined with geo lining to prevent leaching of effluent into the ground water.	Point noted and it will have to be done accordingly.
(vii)	Green belt of adequate width and density shall be developed in 5 ha. of area in addition to 48.97 ha of plant area already under green belt as per the CPCB guidelines.	Plantation is an ongoing activity and it is being done in phase manner.
(viii)	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupational Health Surveillance of the workers has been regularly being done and record maintained.
(ix)	All the recommendations of the Charter for Corporate Responsibility for Environment Protection (CREP) for the aluminium sector shall be strictly implemented.	Charter for Corporate Responsibility for Environment Protection (CREP) is being complied.
(x)	The environmental clearance for the expansion of alumina refinery and establishment of coal based co-generation proposal is subject to the condition that the company shall not undertake any construction or operation of the proposed	Point noted and it is being complied.

**EC Compliance Status Report****Ref. No. J-11011/131/2005-IA.II (I) dated 20.09.05**

	expansion activity till the environmental clearance for the linked mining proposal is obtained.	
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**B. GENERAL CONDITIONS:**

<b>Sr. No</b>	<b>Condition</b>	<b>Compliance Status</b>
(i)	The project authorities must strictly adhere to the stipulations made by the Jharkhand State Pollution Control Board and the State Government.	Point noted and it is being adhered.
(ii)	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	Point noted and it is being complied.
(iii)	Adequate ambient air quality-monitoring stations should be established in the downward direction as well as where maximum ground level concentration of SPM, SO <sub>2</sub> and NO <sub>2</sub> are anticipated in consultation with the State Pollution Control Board. Data on ambient air quality, fugitive emission and stack emissions shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the State Pollution Control Board/Central Pollution Control Board once in six months.	Ambient air quality monitoring station have established with the consultation of SPCB and monitoring done on regular basis. Data on ambient air quality, fugitive emission and stack emission regularly being submitted with environment clearance compliance report to the MoEF&CC, New Delhi, its Regional Office, SPCB & CPCB once in every six months.
(iv)	Industrial waste water shall 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. The treated wastewater should be utilized for plantation purpose.	The quality of waste water is being conformed as per the prescribed standards and recycled in the process. Domestic waste water after treatment being used for the plantation purpose.
(v)	The overall noise levels in and around the plant area shall be kept well within the standard (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time).	The noise control measures has taken and maintained the noise level within the prescribed limit.
(vi)	The project proponent shall also comply with the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	All the necessary measures have been adopted towards environmental protection and socio-economic welfare of neighbouring area is being carried out under company's CSR activities.

**EC Compliance Status Report****Ref. No. J-11011/131/2005-IA.II (I) dated 20.09.05**

(vii)	The project authorities will provide requisite funds both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.	Requisite fund have been provided for environment protection measures and it has not been diverted for any other purpose.
(viii)	The Regional Office of this Ministry at Bhubaneswar/Central Pollution Control Board/State Pollution Control Board will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation should be submitted to them regularly.	Point noted the monitored data along with EC compliance report is being submitted once in an every six month to the concern authorities.
(ix)	The project proponent should inform the public that the project has been accorded environmental clearance by the ministry and copies of the clearance letter are available with the State Pollution Control board/Committee and may also be seen at website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This should be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office.	The project has accorded environmental clearance by the ministry has informed to the public by advertisement in two local newspapers namely 'Prabhat Khabar' and 'Hindustan' dtd. 30 <sup>th</sup> Sep'2005 as well as the copy of the same forwarded to the concern authorities.
(x)	The Project Authorities should inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Point noted and will be complied.

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**SCIENTIFIC RESEARCH LABORATORY**

An ISO 9001:2015 (QMS) & OHSAS 18001:2007 Certified Organization  
 Recognized by Jharkhand State Pollution Control Board  
 Analytical & Environmental Engineering Laboratory  
 C- 144, Aman Green City, Pundag, Ranchi- 834 004, Jharkhand  
 Tele No.: 94303 34029, Mobile: 94701 30700, E-mail: nirajksingh2003@yahoo.co.in

Report No. : SRL/HINDALCO/MAR/17-18

Date: 20.03.2018

**TEST REPORT**

1. Name and Address of the Unit : M/s HINDALCO Industries Limited.  
Muri, Ranchi,  
Jharkhand.
2. Location of Monitoring : Near Sub Station- I
3. Date of Monitoring : 12.03.2018 to 13.03.2018
4. Ambient Temperature : 29°C
5. Average Relative Humidity : 46 %
6. Meteorological Condition : Cloudy
7. Results of Ambient Air Quality :

Sl. No.	PARAMETERS	UNIT	RESULTS
1.	PM <sub>10</sub>	µg/m <sup>3</sup>	88.50
2.	PM <sub>2.5</sub>	µg/m <sup>3</sup>	51.00
3.	Sulphur dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	13.20
4.	Nitrogen Oxides (NOx)	µg/m <sup>3</sup>	32.40
5.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	34.00
6.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	33.00
7.	Lead (Pb)	µg/m <sup>3</sup>	0.03
8.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	0.36
9.	Arsenic (As)	ng/m <sup>3</sup>	0.60
10.	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	<0.01
11.	Nickel (Ni)	ng/m <sup>3</sup>	5.00
12.	Carbon monoxide (CO)	mg/m <sup>3</sup>	0.810

Note: 01. Ambient Fine Dust Sampler [Make Ecotech Instruments, Greater Noida, Model-AAS 190] was used for PM<sub>2.5</sub> collection.

02. Analysis of Lead (Pb), Arsenic (As), Nickel (Ni), and Benzo (a) Pyrene (BaP) was carried out on PM<sub>10</sub> fraction.

for Scientific Research Laboratory,

*Niraj*  
 (Dr. Niraj Kumar Singh) 20/03/18  
 In-charge, Jharkhand office.

Head Office: 90, Lake East (4<sup>th</sup> Road) Santoshpur, Jadavpur, Kolkata-700075  
 Tele Fax: 033 2416 2267. Tel: 033 2416 1311, E-mail: Jyotirmoy\_srl vsnl.net.

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Report No. : SRL/HINDALCO/MAR/17-18

Date: 20.03.2018

**TEST REPORT**


1. Name and Address of the Unit : M/s HINDALCO Industries Limited.  
Muri, Ranchi,  
Jharkhand.
2. Location of Monitoring : Steel Yard (Near Red Mud Pond- 2)
3. Date of Monitoring : 12.03.2018 to 12.03.2018
4. Ambient Temperature : 29°C
5. Average Relative Humidity : 46 %
6. Meteorological Condition : Cloudy
7. Results of Ambient Air Quality :

Sl. No.	PARAMETERS	UNIT	RESULTS
1.	PM <sub>10</sub>	µg/m <sup>3</sup>	91.80
2.	PM <sub>2.5</sub>	µg/m <sup>3</sup>	53.00
3.	Sulphur dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	11.50
4.	Nitrogen Oxides (NOx)	µg/m <sup>3</sup>	36.40
5.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	38.00
6.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	35.00
7.	Lead (Pb)	µg/m <sup>3</sup>	0.05
8.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	0.38
9.	Arsenic (As)	ng/m <sup>3</sup>	0.70
10.	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	<0.01
11.	Nickel (Ni)	ng/m <sup>3</sup>	5.00
12.	Carbon monoxide (CO)	mg/m <sup>3</sup>	0.872

Note: 01. Ambient Fine Dust Sampler [Make Ecotech Instruments, Greater Noida, Model-AAS 190] was used for PM<sub>2.5</sub> collection.

02. Analysis of Lead (Pb), Arsenic (As), Nickel (Ni), and Benzo (a) Pyrene (BaP) was carried out on PM<sub>10</sub> fraction.

for Scientific Research Laboratory,

  
(Dr. Niraj Kumar Singh)  
In-charge, Jharkhand office.

Head Office: 90, Lake East (4<sup>th</sup> Road) Santoshpur, Jadavpur, Kolkata-700075  
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Report No. : SRL/HINDALCO/MAR/17-18

Date: 20.03.2018

**TEST REPORT**

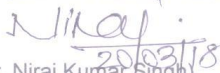
1. Name and Address of the Unit : M/s HINDALCO Industries Limited.  
Muri, Ranchi,  
Jharkhand.
2. Location of Monitoring : Near Union Club Campus (Near Football Ground)
3. Date of Monitoring : 12.03.2018 to 13.03.2018
4. Ambient Temperature : 29°C
5. Average Relative Humidity : 46 %
6. Meteorological Condition : Cloudy
7. Results of Ambient Air Quality :

Sl. No.	PARAMETERS	UNIT	RESULTS
1.	PM <sub>10</sub>	µg/m <sup>3</sup>	83.60
2.	PM <sub>2.5</sub>	µg/m <sup>3</sup>	49.00
3.	Sulphur dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	12.00
4.	Nitrogen Oxides (NO <sub>x</sub> )	µg/m <sup>3</sup>	29.50
5.	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	32.00
6.	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	30.00
7.	Lead (Pb)	µg/m <sup>3</sup>	0.03
8.	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	0.35
9.	Arsenic (As)	ng/m <sup>3</sup>	0.46
10.	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	<0.01
11.	Nickel (Ni)	ng/m <sup>3</sup>	4.00
12.	Carbon monoxide (CO)	mg/m <sup>3</sup>	0.780

Note: 01. Ambient Fine Dust Sampler [Make Ecotech Instruments, Greater Noida, Model-AAS 190] was used for PM<sub>2.5</sub> collection.

02. Analysis of Lead (Pb), Arsenic (As), Nickel (Ni), and Benzo (a) Pyrene (BaP) was carried out on PM<sub>10</sub> fraction.

for Scientific Research Laboratory,

  
(Dr. Niraj Kumar Singh)  
In-charge, Jharkhand office.

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Tele Fax: 033 2416 2267. Tel: 033 2416 1311, E-mail: Jyotirmoy\_srl\_vsnl.net.



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### STACK MONITORING REPORT

Name of the Industry : M/s HINDALCO Industries Limited.  
Muri, Ranchi,  
Jharkhand.

Date of sampling : 12.03.2018

Weather condition : Cloudy

Stack number if any : 01 (Boiler Duct No.2)

Height of stack from ground level (in metre) : 115

Inner dimension of stack (in metre) : 2m x 2.5m

Height of port hole (in metre) : 12

Atmospheric temperature (in °C) : 29

Stack gas temperature (in °C) : 138

Stack gas velocity (in m/s) : 11.66

Volumetric flow rate (in Nm<sup>3</sup>/hr) : 1,52,175

Dust concentration (in mg/Nm<sup>3</sup>) : 72

Emission rate (in kg/hr) : 10.95

Name of fuel & quantity used : Coal – 40 T/ hour

Production capacity : 30 MW (15 MW x 2)

Stack Attached to : ESP

### GASES

Sulphurdioxide (in mg/Nm<sup>3</sup>) as SO<sub>2</sub> : 292

Nitrogenoxides (in mg/Nm<sup>3</sup>) as NO<sub>2</sub> : 94

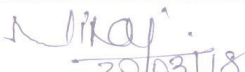
Carbon Monoxide (in %) as CO : <0.2%

Carbon dioxide (% v/v by Orsat method) : 5.6

Note: Sampling was carried out at CO<sub>2</sub> 12%

Remarks: Dust concentration was found 72 mg/Nm<sup>3</sup> against prescribed limit of 100 mg/Nm<sup>3</sup>.

for Scientific Research Laboratory,

  
(DR. NIRAJ KUMAR SINGH)  
In-charge, Jharkhand Office.

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### STACK MONITORING REPORT

Name of the Industry : M/s HINDALCO Industries Limited.  
Muri, Ranchi,  
Jharkhand.

Date of sampling : 12.03.2018

Weather condition : Clear

Stack number if any : 01 (Boiler Duct No.3)

Height of stack from ground level (in metre) : 115

Inner dimension of stack (in metre) : 2m x 2.5m

Height of port hole (in metre) : 12

Atmospheric temperature (in °C) : 29

Stack gas temperature (in °C) : 133

Stack gas velocity (in m/s) : 11.46

Volumetric flow rate (in Nm<sup>3</sup>/hr) : 1,51,407

Dust concentration (in mg/Nm<sup>3</sup>) : 78

Emission rate (in kg/hr) : 11.81

Name of fuel & quantity used : Coal – 40 T/ hour

Production capacity : 30 MW (15 MW x 2)

Stack Attached to : ESP

### GASES

Sulphurdioxide (in mg/Nm<sup>3</sup>) as SO<sub>2</sub> : 303

Nitrogenoxides (in mg/Nm<sup>3</sup>) as NO<sub>2</sub> : 96


Carbon Monoxide (in %) as CO : <0.2%

Carbon dioxide (% v/v by Orsat method) : 6.2

Note: Sampling was carried out at CO<sub>2</sub> 12%

Remarks: Dust concentration was found 78 mg/Nm<sup>3</sup> against prescribed limit of 100 mg/Nm<sup>3</sup>.

for Scientific Research Laboratory,

  
(DR. NIRAJ KUMAR SINGH)  
In-charge, Jharkhand Office.

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Tele Fax: 033 2416 2267. Tel: 033 2416 1311, E-mail: Jyotirmoy\_srl\_vsnl.net.



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### STACK MONITORING REPORT

Name of the Industry	: M/s HINDALCO Industries Limited. Muri, Ranchi Jharkhand.
Date of sampling	: 13.03.2018
Weather condition	: Clear
Stack number if any	: 01 (CFBC Stack)
Height of stack from ground level (in metre)	: 85
Inner dimension of stack (in metre)	: 03
Height of port hole (in metre)	: 46
Atmospheric temperature (in °C)	: 29.5
Stack gas temperature (in °C)	: 164
Stack gas velocity (in m/s)	: 7.40
Volumetric flow rate (in Nm <sup>3</sup> /hr)	: 1,28,454
Dust concentration (in mg/Nm <sup>3</sup> )	: 34
Emission rate (in kg/hr)	: 4.36
Name of fuel & quantity used per shift	: Furnace Oil - 78 litre/ton of Calcined Alumina
Production capacity	: 1300 tpd (Calcined Alumina)
Pollution Control Device	: ESP


### GASES

Sulphurdioxide (in mg/Nm <sup>3</sup> ) as SO <sub>2</sub>	: 28
Nitrogenoxides (in mg/Nm <sup>3</sup> ) as NO <sub>2</sub>	: 36
Carbon Monoxide (in %) as CO	: <0.2%
Carbon dioxide (% v/v by Orsat method)	: 5.6

Note: Sampling was carried out at CO<sub>2</sub> 12%

Remarks: Dust concentration was found 34 mg/Nm<sup>3</sup> against prescribed limit of 50 mg/Nm<sup>3</sup>.

for Scientific Research Laboratory,

  
(DR. NIRAJ KUMAR SINGH)  
In-charge, Jharkhand Office.

Head Office: 90, Lake East (4<sup>th</sup> Road) Santoshpur, Jadavpur, Kolkata-700075  
Tele Fax: 033 2416 2267. Tel: 033 2416 1311, E-mail: Jyotirmoy\_srl vsnl.net.



## SCIENTIFIC RESEARCH LABORATORY

An ISO 9001:2015 (QMS) & OHSAS 18001:2007 Certified Organization  
Recognized by Jharkhand State Pollution Control Board  
Analytical & Environmental Engineering Laboratory  
C- 144, Aman Green City, Pundag, Ranchi- 834 004, Jharkhand  
Tele No.: 94303 34029, Mobile: 94701 30700, E-mail: nirajksingh2003@yahoo.co.in

### TEST REPORT

Sample No.: EW- MAR  
Report No.: SRL/HINDALCO/MAR/17-18

Reporting Date: 20.03.2018

### SAMPLE DRAWN BY SCIENTIFIC RESEARCH LABORATORY


Customer Name & Address : M/s Hindalco Industries Limited.  
Muri, Ranchi,  
Jharkhand.  
Type of the Sample : Effluent Water  
Location : ETP Outlet  
Sampling Method : Grab  
Date of Sampling : 13.03.2018  
Sample Received on : 13.03.2018  
Environmental Condition : Cloudy, Temp. 29°C

### RESULTS

Sl. No.	Parameters	Unit	Permissible Limit*	Results
1.	Temperature	°C	-	32.6
2.	pH	-	5.5 – 9.0	7.57
3.	Total Suspended Solids	mg/l	100	20
4.	Chemical Oxygen Demand	mg/l	250	216
5.	Biological Oxygen Demand 3 Days at 27°C	mg/l	30	10.0
6.	Oil and Grease	mg/l	10	<5
7.	Iron (as Fe)	mg/l	3.0	1.45
8.	Fluoride (as F)	mg/l	2.0	1.70
9.	Aluminium (as Al)	mg/l	-	0.22
10.	Silica (as SiO <sub>2</sub> )	mg/l	-	36.0
11.	Mercury (as Hg)	mg/l	0.01	<0.001
12.	Lead (as Pb)	mg/l	0.1	<0.05
13.	Vanadium (as V)	mg/l	0.2	<0.1

\*General standards for discharge of environmental pollutants into inland surface water as per CPCB, MoEF&CC.

for Scientific Research Laboratory,

  
(DR. NIRAJ KUMAR SINGH)  
In-charge, Jharkhand Office.

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**EC Compliance Status Report****Ref. No. J-11011/131/2005-IA.II (I) dated 20.09.05****Fugitive emission monitoring report**

Locations	Red Mud Pond (3&4)	Bauxite Handling Area	Coal Handling Area
Limit	1200 µg/m <sup>3</sup>	1200 µg/m <sup>3</sup>	1200 µg/m <sup>3</sup>
Month	Monitored Values in µg/m <sup>3</sup>		
Oct-17	598	616	614
Nov-17	672	731	711
Dec-17	614	681	659
Jan-18	619	610	634
Feb-18	506	653	710
Mar-18	809	905	887

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