

Ref No: HIL/LHD/VP (M)/MoEF/ 128

Date: 22.05.13

To, Mr S Kerketta Joint Director(S) MoEF, GOI, Eastern Regional Office A/3, Chandrashekharpur, Bhubaneshwar- 751023 (Orissa)

Sub: Compliance Report of EC conditions for Hisri New (14.55 ha) Bauxite Mining project of M/s Hindalco Industries Limited located in Lohardaga District of Jharkhand for the period Oct' 2012 - March' 2013.

Ref: Environmental Clearance letter no J-11015/531/2007-IA II (M) dated 17th June 2011

Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for Hisri New (14.55 ha) Bauxite Mining project of M/s Hindalco Industries Limited, located in Lohardaga District of Jharkhand for the period Oct' 2012 - March' 2013.

Hope you will find the same in order.

Thanking You

Yours Sincerely FOR M/s Hindalco Industries Limited,

(Bijesh Kumar Jha) VP (Mines)

Enclosure: - As Above

1

# Compliance of conditions laid down in Environmental Clearance

HISRI (NEW) BAUXITE MINES(14.55 Ha)

Period: Oct'12 - March'13

Environmental Clearance letter no J-11015/531/2007-IA II (M) dated 17<sup>th</sup> June 2011

SI	Conditions	Compliance Status		
Specific Conditions  The project proponent shall obtain Consent to Establish and Consent to Operate from the Jharkhand State Pollution Control Board and effectively implement all the conditions stipulated therein.  The environmental clearance is subject to forestry clearance.  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.  The mining operation shall be restricted to above ground water table and it should not intersect the ground water table. In case of working below  Consent to Establish & Consent operate obtained from Jharkhand State Constent operate is valid up to 31.12.13. Consent operate obtained from Jharkhand State Pollution Control Board.  The environmental clearance is subject to approval operate is valid up to 31.12.13. Consent operate is valid up to 31.1				
	Establish and Consent to Operate from the Jharkhand State Pollution Control Board and effectively implement all the conditions stipulated therein.	operate obtained from Jharkhand State Pollution Control Board. Consent to operate is valid up to 31.12.13. Copy		
2		Forest clearance obtained.		
	of the state land use Department, Government of Jharkhand for diversion of agricultural land for	Mining Lease is granted/ renewed by the State Govt. after due consideration and Cabinet approval on recommendation of DC who is the competent authority to give permission for using the agricultural land for non-agricultural purpose.		
4	ground water table and it should not intersect the	Depth of mining will be 15-20 mtr bgl (maximum). Ground water table level is 40-50 mtr bgl. Thus there is no chance to intersect ground water table during mining operation. Working zone will be restricted to above ground water table.		
5	The Project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operations. The first order streams and the seasonal nallahs originating from the mining lease area shall be protected.	It is being ensured. No natural water course has been obstructed.		
6	The top soil, if any shall temporarily be stored at earmarked site (s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.	Sequential backfilling and reclamation of the mined out area are being exercised. Topsoil is being spread on backfilled area for reclamation of the area.		
7	The solid waste generated during the mining operation shall be backfilled and there shall be no external overburden dump left at the end of the mine life. The entire excavated area of 12.19 ha. shall be backfilled and reclaimed by plantation. The backfilling should be carried out in such a manner that it is restored to the normal ground level. Monitoring and management of	Overburden and waste rock are being used for back filling. Data pertaining to backfilling is enclosed as Annexure.		

	rehabilitated areas should continue until the	
	vegetation becomes self-sustaining. Compliance	
	status should be submitted to the Ministry of	
	Environment & Forest on six month basis.	
8	Catch drains and siltation ponds of appropriate size should be constructed around the working pit, sub- grade dump, soil and mineral dumps to arrest flow	No run off is being generated from mining activities. However, to collect
	of silt and sediment directly into the agricultural fields, the Kisco Nadi, the Sukri Nadi, the Chungahat nallah, the Barki nallah and other water bodies. 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.	and manage rainwater during monsoon drains, Pit sumps are made, part of mined out area is used as settling tank. Settled water is being used for sprinkling of quarry, roads, green belt development, etc.
	Garland drain, settling tanks and check dams of appropriate size, gradient and length shall	
	be constructed for both around the minepit and sub grade dump to prevent run off of water and flow sediments directly into the agricultural fields, the Kisco Nadi, the Sukri Nadi, the Chungahat nallah,	
	the Barki nallah and other water bodies 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.	×
9	Dimension of the retaining wall at the toe of the sub-grade, dump and OB benches within the mine	Complied
	to check run-off and siltation should be based on the rain fall data.	
10	Plantation shall be raised in an area of 12.7 ha	Being carried out progressively.
	including a 7.5 m. wide green belt in the safety	
	zone around the mining lease by planting the native	
	species around ML area, backfilled and reclaimed	
	area, around water body, roads etc. in consultation	
	with the local DFO / Agriculture Department. At	
	least 1500 trees per year shall be planted with a	
	tree density of 1000 trees per hectare. Greenbelt	
	shall be developed all along the mine lease area in	
	a phased manner and shall be completed within	
	first five years.	

11	Effective safe guard measures, such as regular	
	water sprinkling shall be carried out in critical	
	areas prone to air pollution and having high levels	
	to particulate matter such as around loading and	
	unloading point and all transfer points. Extensive	
	water sprinkling shall be carried out on haul roads.	
	It should be ensured that the Ambient Air Quality	
- 81	parameters conform to the norms prescribed by the	
10	Central Pollution Control Board in this regard.	
12	The project authority should implement suitable	System is already in place.
	conservation measures to augment ground water	
	resources in the area in consultation with the	
13	Regional Director, Central Ground Water Board.	
13	Regular monitoring of ground water level and	It is being monitored.
	quality should be carried out by establishing a	
	network of existing wells and constructing new	
	piezometers during the mining operation. The	
	periodic monitoring [(at least four times in a year – pre-monsoon (April-May), monsoon (August),	
	post-monsoon (November) and winter (January)	
	once in each season)] shall be carried out in	
	consultation with the State Ground Water Board/	
	Central Ground water Authority and the data thus	
	collected may be sent regularly tot eh Ministry of	
	Environment and Forests and its Regional office	
	Bhubneshwar, The Central Ground Water	
	Authority and the Regional Director, Central	
	Ground Water Board. If at any stage, it is observed	
	that the ground water table is getting depleted due	
	to the mining activity, necessary corrective	
	measures shall be carried out.	
14	Monitoring to the springs shall be carried out for	Complied.
	the quality and quantity of water regularly so as to	oompriou.
	ensure that there is no adverse impact on the same	
	due to the project. Records in this regards shall be	
	maintained.	
15.	It shall be ensured that there is no change in the	Complied.
	hydrology of the area due to the project.	
	•	
16.	The project proponent shall obtain necessary prior	Complied. Water cess is being paid to
	permission of the competent authorities for drawl	State Pollution Control Board regularly.
	of requisite quantity of water (surface water and	John John John Togularly.
	ground water) required for the project.	
17.	Suitable rain water harvesting measures on long	Complied.
	term basis shall be planned and implemented in	•
	consultation with the Regional Director, Central	
	Ground Water Board.	

18.	Appropriate mitigative measures shall be taken to prevent pollution of the Kisco Nadi, the Sukri Nadi	Complied.
	and other rivers in the buffer zone of the mine, in consultation with the State Pollution Control	
19	Board.	Daniles and Continu
19	Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken	Regular maintenance of vehicles are undertaken to minimize vehicular
	for maintenance of vehicles used in mining	undertaken to minimize vehicular emission. Care is taken on regular basis
	operations and transportation of mineral from mine	to arrest spillage/fugitive dust emission.
	face to the Beneficiation plant The vehicles	At most care is taken to cover bauxite
	should be covered with a tarpaulin and shall not be	loaded trucks with Tarpaulin and
	overloaded.	overloading is avoided.
20	Blasting operation should be carried out only	Being complied with.
	during the daytime. Controlled blasting should be	
	practiced. The mitigative measures for control of	
	ground vibration and to arrest fly rocks and	
21	boulders should be implemented.  Drills shall either be operated with dust extractors	Being complied with.
21	or equipped with water injection system.	Being compiled with.
	of equipped with water injustion by blein.	
22	Mineral handling area shall be provided with	Complied.
	adequate number of high efficiency dust extraction	- Compilea.
	system. Loading and unloading areas including all	
	the transfer points should also have efficient dust	
	control arrangements. These should be properly	
	maintained and operated.	
23	Sewage treatment plant should be installed for the	There is no likely hood of effluent from
	colony. ETP should also be provided for workshop and wastewater generated from mining operations.	mine, hence ETP is not required. The
	and wastewater generated from mining operations.	sewage water for working population is planned to be collected through Septic
		Tank/Soak Pit and treated in Sewage
		Treatment Plant already existing in
		adjoining Bagru ML.
24	The project authorities should undertake sample	Agreed. Being getting done through
	survey to generate data on pre-project community	medical camp.
	health status within a radius of 1 Km. from	420
0.7	proposed mine.	
25	Pre-placement medical examination and periodical	System is already in place
	medical examination of the workers engaged in the	
	project shall be carried out and records maintained. For the purpose, schedule of health examination of	
	the workers should be drawn and followed	
	accordingly.	
26.	Provision shall be made for the housing of	System is already in place.
	construction labour within the site with all	,
	necessary infrastructure and facilities such as fuel	
	for cooking, mobile toilets, mobile STP, safe	
	drinking water, medical health care, crèche etc.	

	The housing may be in the form of the temporary structures to be removed after the completion of the project.	
27	The critical parameters such as RSPM (Particulate matter with size less than 10 μm (i.e. PM <sub>10</sub> , PM <sub>2.5</sub> ) and NO <sub>x</sub> in the ambient air within the impact zone, peak particle velocity at 300 m. distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharge water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)], The monitored data shall be uploaded on the website of the Company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in Public domain. The Circular no. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.	Being carried out.
28	A Final Mine Closure plan along with details of Corpus Fund should be submitted to the Ministry	Progressive Mine Closure Plan duly approved by Indian Bureau of Mines is
	of Environment & Forest 5 years in advance of final mine closure for approval.	with us. FMCP is submitted to IBM for approval.

# **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 & Forests.	Complied.
2	No change in the calendar plan including excavation, quantum of mineral bauxite and waste should be made.	Complied.
3	Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest and wildlife department.	Complied.
4	Four ambient air quality-monitoring station should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 µm (i.e. PM <sub>10</sub> ) PM <sub>2.5) &amp; NO<sub>X</sub> monitoring. Location of the stations should be decided based on the metrological data, topographical features and</sub>	Being carried out. Enclosed as Annexure.

	environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	
5	Data on ambient air quality RSPM (Particulate matter with size less than 10 $\mu m$ i.e. $PM_{10}$ ) & $NO_X$ 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.	Being carried out. Enclosed as Annexure.
6	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.	Being carried out.
7	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.	Compiled.
8	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.	Being carried out.
9	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, if needed.	Being carried out.
10	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.	Separate Environmental Management Cell (EMC) has been constituted and is functioning effectively. Copy enclosed as Annexure.
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	The fund earmarked for environmental protection measures is being kept in separate account. Year wise expenditure is being reported to the Ministry and its

	reported to the Ministry and its Regional Office located at Bhubneshwar.	Regional Office located at Bhubneshwar.
12	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.	
13	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.
14	The project proponent shall submit six monthly report on the status of the compliance of the stipulated environmental Clearance conditions including results of monitoring data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Officer, Bhubaneshwar, the respective Zonal office of Central Pollution Control Board the State Pollution Control Board. The proponent shall upload the status of compliance of the Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment and Forests, Bhubneshwar, the respective Zonal Office of Central Pollution Control Board and State Pollution Control Board.	Being complied
15	A copy of clearance letter shall be sent by the proponent to concerned Panchyat, Zila Parisad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied.
16	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.	Complied.

17	The environmental statement for each financial	Complied
1 ,	year ending 31 <sup>st</sup> March in Form – V as is	Compilea.
	mandated to be submitted by the project	0
	proponent to the concerned Stated pollution	
	Control Board as prescribed under the	
	Environment (Protection) Rules, 1986, as	
	amended subsequently, shall also be put on the	
	website of the company along with the status	
	of the compliance of environmental clearance	H
	conditions and shall also be sent to the	
	Regional Office of the Ministry of	
	Environment and Forests, Bhubneshwar by e-	
	mail.	
18.	The Company shall submit within 3 month	Already Submitted.
	their policy towards Corporate Environment	
	Responsibility which should inter-alia address	
	(i) Standard operating process/ procedure to	
	bring into focus any infringements/ deviation/	,
	violation of environmental or forest norms/	
	conditions, (ii) Hierarchical system or	
	Administrative order of the Company to deal	্ব
	with environmental issues and ensuring	
	compliance with environmental issues and	
	ensuring compliance with Environment	
	Clearance conditions and (iii) System of	
	reporting of non compliance / violation of	
	environmental norms to the Board of Directors	
	of the Company and / or stakeholders or	
	shareholders.	
19	The project authorities should advertise at least	Complied.
	in two local newspapers widely circulated, one	•
	of which locality concerned, within 7days of	6
	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 http:/	
	/envfor.nic.in and a copy of the same should	
	be forwarded to the Regional Office of this	9
<u></u> _	Ministry located at Bhubneshwar.	



Print Date: 01/04/2013

SAMPLE COLLECTED BY SGS INDIA PVT, LTD.

Report No : KG13-002092.001

JOE No: KG13-002092

Report Control No : KGR0000013682

Sample Described by Customer as : GROUND WATER

Client Name

: Hindalco Industries Limited(Mines Division)

**Client Address** 

: Lohardaga,

Postal Code State

: 835203

: Jharkhand

Country Sample Type

; India : GROUND WATER

Received

: 18/03/2013

Registered

: 18/03/2013

Marks on Sample

: Location : Bagru Chappi GW-1

Quantity

: 5.5L app : 09.03.2013, time : 2.30 pm

Sample Collected

Test Start/End Date : 18/03/2013 - 01/04/2013

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	Analysis	Method Resu	Method Result U		Unit		nenVLimit 10500:2012
					Acceptable	Permissible	
-	Colour	IS:3025 (Parl-4):1983 (Reaff,2006)	5.0	Hz	5	1=	
	Odour	IS:3025 (Part-5):1983 (Reaff,2006)	Agreeable		Agreeable	Agrecable	
	Taste	IS:3025 (Part-8):1983 - (Reaff.2006)	Agreeable		Agreeable	Agreeable	
	рН	IS:3025 (Part-11):1983 (Reaff.2006)	7.20*		6.5	8.5	
	Total Hardness (as CaCO3)	IS:3025 (Part-21):1983 (Reaff.2006)	33.33	mg/L	200	. 600	
	Iron (as Fe)	IS:3025 (Part-2)	0.08	mg/L	0.3	No relaxation	
	Fluoride (as F)	IS:3025 (Part-60):2008	<0.10	mg/L	1.0	1.5	
ĺ	Residual Free Chlorine	IS:3025 (Part-26):1986 (Reaff.2003)	<0.10	mg/L	0.2	10	
	Chloride (as CI)	IS:3025 (Part-32):1988 (Reaff,1999)	5.39	mg/L	250	1000	
	<b>Total Dissolved Soilds</b>	IS:3025 (Part-16 :1984 (Reaff.1996)	58.00	mg/L	500	2000	
	E.coli	IS:1622:1981(Reaff.2003)	Absent	per 100ml		Absent/100m	
	Coliform bacteria	IS:1622-1981 (Reaffirmation 2003)	Absent	per 100ml		Absent/100n.	
-	Calcium (as Ca)	IS:3025 (Part-40) :1991 (Reaff.2003)	10.50	mg/L	75	507-	
-	Magnesium (as Mg)	IS:3025 (Part-46):1994	1.72	mg/L	30	100	

Page 1 of 3

(Reaff. 1999)

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Print Date: 01/04/2013

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Report No : KG13-002092.001

JOE No: KG13-002092

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	Report Control No	: KGR0000013682			
Analysis	Method Resu		Unit	Requirement/Limit As per IS:10500:2012	
	_			Acceptable	Permissibl
Copper (as Cu)	IS:3025 (Part-2)	<0.01	mg/L	0.05	,
Manganese (as Mn)	IS:3025 (Part-2)	<0.01	mg/L	0.1	0
Sulphate (as SO4)	IS:3025 (Part-24):1986 (Reaff.1998)	<2.00	mg/L	200	40
Nitrate (as NO3)	IS:3025 (Part-34):1988 (Reaff.1999)	6.91	mg/L	45	No relaxatio
Phenolic Compound (as C6H5OH)	IS:3025 (Part-43):1992 (Reaff.2003)	<0.001	mg/L	0.001	0 00
Mercury (as Hg)	IS:3025 (Part-48):1994 (Reaff.1999)	<0.001	mg/L	0.001	No relaxatio
Cadmium (as Cd)	IS:3025 (Part-41):1992 (Reaff.2003)	<0.003	mg/L	0.003	No relaxation
Selenium (as Se)	IS:3025 (Part-2)	<0.005	mg/L	0.01	No relaxation
Arsenic (as As)	IS:3025 (Part-37):1968 (Reaff.1999)	<0.005	mg/L	0.01	No relaxation
Cyanide (as CN)	IS:3025 (Part-27):1986 (Reaff.2003)	<0.020	mg/L	0.05	No relaxatio
Lead (as Pb)	IS:3025 (Part-47):1994 (Reaff.1999)	<0.005	mg/L	0.01	No relaxation
Zinc (as Zn)	IS:3025 (Part-2)	0.12	mg/L	5	1
Anionic Surface Active Agent (as MBAS)	IS:13428:2005: Annex K	<0.05	mg/L	0.2	1
Chromium (as Cr)	IS:3025 (Part-2)	<0.01	mg/L	0.05	No relaxation
Mineral Oil	IS:3025 (Part-39):1991 (Reaff.2003)	<0.01	mg/L	0.5	No relaxation
Total Alkalinity (as CaCO3)	IS:3025 (Part-23) :1986 (Reaff.2003)	38.61	mg/L	200	в
Aluminium (as Al)	IS:3025 (Part-55):2003	< 0.03	mg/L	0.03	0
Boron (as B)	IS:3025 (Part-57):2005	0.06	mg/L	0.5	1
Turbidity	IS:3025 (Part-10):1984 (Reaff,2006)	1.15	NTU	1	

Remark: \*Analyzed at site.

### Page 2 of 3

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Print Date: 01/04/2013

Report No : KG13-002092.001

JOE No: KG13-002092

Report Control No : KGR0000013682

Per pro SGS India Private Lt

de v. Or alle about &

**Asish Chakraborty Laboratory Manager Authorized Signatory** 

\*\*\*\*End of Report\*\*\*\*

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Date: 12.03.2013 REPORT NO.:KG13-001887.001 Report Control No KGR0000011070 IOE NO KG13-001897 SAMPLE DRAWN BY SGS INDIA PRIVATE LTD. Sample described as FLUE GAS Name of the Industry . M/s. HINDALCO INDUSTRIES LIMITED Address Mines Division, Lohardaga, Jharkhand, PIN - 835 302 14 02 2013 (15:00 - 15:40 Hrs) Date & time of sampling: Bagru/Bjuisal/Hisri(Old)/Hisri(New) Bauxite Mines (Bagru Plateau) Sampling Site DG Set (250 KVA) Location General information about stack: DG Set ( 250 KVA) Stack connected to Burning of H.S.D **Emission** due to MS Material of construction of Stack Circular Shape of Stack Whether stack is provided with permanent platform & ladder : Yes 250 KVA 6 Capacity 100 KVA Running Load Physical characteristics of stack: 8. 7.0 M Height of the stack (a) from ground level Diameter of the stack at sampling point 0.2032 M 6.25 M Height of the sampling point from GL 3 Analysis/Characteristic of Stack C. 2. Fuel Consumption: 30 Lt/Hr Fuel used H.S.D. Limit as per MOEF G.S.R.448(E) RESULTS PROTOCO PARAMETERS D. IS 11255 Part: 3 1985 (Reaff 2003) Temperature of emission ( °C) IS 11255 Part 3 1985 (Reaff 2003) 682 Barometric pressure (mm of Hg) IS 11255 Part : 3 1985 (Reaff 2003) 9.82 Velocity of gas ( m/sec.) IS 11255 Part : 3 1985 (Reaff.2003) 541 Quantity of gas flow (Nm3/hr.) IS 11255 Part : 3 1985 (Reaff 2003) 68 Concentration of Carbon dioxide ( % v/v ) USEPA - 6C 68 Concentration of Sulphur dioxide (mg/Nm³) USEPA - 7E 92 1.06 Concentration of Nitrogen dioxide (gm/kw-h) IS 11255 Part : 3 1985 (Reaff 2003) 130 8 Concentration of Oxygen (% v/v) IS 11255 Part: 1 1985 (Reaff 2003)

Checked by

Pollution control device

F. Remarks : Nil

Concentration of Particulate Matters(gm/kw-h)

Details of pollution control devices attached with the stack

Dipankar De Sarkar

per pro SGS India Private Ltd.

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""End of Report""

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SGS India Pvt. Ltd Laboratory. CS Pior-612(p), Moura. Henspukuria, Diamond Harbour Road, PO.-John South 24 Pargenes, Kolksta-700104 Phone : 91-33-64996700, 64996701.

Regd & Corp. OH : SGS House, 48, A.S. Marg. Vishrol (West), Margadi-400083, Tel. (1922) 25798421 to 28 Fex. (1922) 75728431 to 35 West 916-505 Chapt (1955 SA).

Reged & Corp. OH : SGS House, 48, A.S. Marg. Vishrol (West), Margadi-400083, Tel. (1922) 25798421 to 28 Fex. (1922) 75728431 to 28 Fex. (1922) 75728431

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Print Date : 18/03/2013

Report No : KG13-001940.003

JOE No : KG13-001940

Report Control No : KGR0000012034
Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING

: Hindatco Industrios Limited(Mines Division)

Client Name Client Address Postal Code State

: Lohardaga, : 835203

: Jhatikand : Jhatikand : India : AMBIENT AIR QUALITY MONITORING : 12/03/2013

State
Country
Sample Type
Received
Registered
Marks on Sample
Sampling Site

12/03/2013

: 12/02/2013 : Location : Korgo Village, date : 14.02.2013 : BagrurBhusariHisn NewiHisn Old Bauxite Mines(Bagru Plateau)

Test Start/End Date : 12/03/2013 - 18/03/2013

Analysis	alysis Method Result		Unit	Requirement/Limit as Pe NAAQS	
				Min	Max
Particulate Matter (PM10 )	IS:5182 (Parl-23 ):2006	65	4g/m3		100
Particulate Metter (PM2.5)	USEPA CFR(40) Appendix-L	27.70	ug/m3		60
Oxides of Nitrogen (NOx)	IS:5182 (Pan-6):1975 (Reaff.2004)	8.45	ug/m3	F#85	80
Sulphur Dioxide (SO2)	IS:\$182 (Park-2):2001 (Reaff.2006)	<5.00	ug/ma	595	80
Carbon Monoxide	By NDIR Spectroscopy.	<0.10	PPM		

WARNING. The aampreigs to which this findings recorded herein (the "Findings" relating to the claims are follows: and a provided by the Claims or warning of the surroger's interestable warning was and a or provided by the Claims or warning of the surroger's interestable warning wash made to the company accepts on leading with regard to the claims of the Claims.

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Ross Incide PVL Lid

Ross R Corp. ON: SGE Rosses, AB, A.S. Maris Valveto (Misses, Murres-400086, Tel. 4022) 55756473 to 76 year; 1022-25736431 to 76 year; 1022-25736431

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Print Date : 18/03/2013

Report No : KG13-001940 003

JOE No : KG13-001940

Report Control No : KGR0000012034

Per pro SGS India Private Ltd

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Satya Manna Section Incharge - ENVI **Authorized Signatory** 

\*\*\*\*End of Repor\*\*\*\*

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Road & Core Off - 608 House 4g. A.S. Maria Vehicle (Media Summaria Costs) Service (Media Summaria Costs) Se



SAMPLE DRAWN BY SGS INDIA PVI. LTD.

Print Date : 18/03/2013

Report No : KG13-001940.004

JOE No : KG13-001940

Report Control No : KGR0000012034
Semple Described by Customer as : AMBIENT AIR QUALITY MONITORING

; Hindalco Industries Limited(Mines Division)

Client Name Client Address Postal Code

: Lohardaga : Lonardaga : 835203 : Jherkhand : India : AMBIENT AIR QUALITY MONITORING : 12/03/2013

Country Sample Type Received

Registered Marks on Sample Sampling Site

: 12/03/2013
: Location : Siyarpara Village, date : 14.02.2013
: Bagru/Bhusar/Hisn New/Hisn Old Bauxite Mines(Bagru Plateau)

Test Start/End Date : 12/03/2013 - 18/03/2013

Analysis	Method	Result	Unit		vaaqs
				Min	Max
Particulate Matter (PM10 )	IS:5182 (Part-23 ) 2005	53	sg/m3		100
Particulate Matter (PM2.5)	USEPA CFR(40) Appendix L	70.55	varm3	1950	60
Oxides of Nitrogen (NOx)	IS-5182 (Part-6):19/5 (Realf-2004)	7.97	ug/m3	*	80
Sulphur Dioxide (502)	IS:5182 (Part-2):2001 (Reaff 2008)	₹5.00	ugan3	×	80
Carbon Monoxide	By NOIR Spectroscopy.	<0.10	PPM		

Page 1 of 2

WARNING: The sample(s) to which the findings recorded haven (the "Findings") reads weathered driven and if or provided by the Client or by a third party accept at the Client or the findings consisted no wearanty of the sample's segmentationers of any goods and shocky relate to the sample(s). The Company accepts no leading with regard

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Print Date : 18/03/2013

Report No : KG13-001940.004

JOE No : KG13-001940

Report Control No : KGR0000012034

Per pro SGS India Private Ltd

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Satya Manna

Section incharge - ENVI **Authorized Signatory** 

\*\*\*\*End of Report\*\*\*\*

Unless otherwise stated the results afteren in this test report refer only to the sample(s) fested and such sample(s) are retained for 7 days (in case of perturbile isoms) and 30 days for all other samples. The tumples from repulatory bodies are to be retained as specified. This obsciries sample are reproduced except in this without prior written approval The Company

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SAMPLE DRAWN BY SQS INDIA PVT. LTD.

Print Date ; 18/03/2013

Report No : KG13-001940.002

JOE No : KG13-001940

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING

: Hindalco industries Limited(Mines Division)

Client Name Client Address Postal Code State

: Lohardaga. : 835203 : Jharkhand

Country Sample Type Received

: India
: India
: AMBIENT AIR QUALITY MONITORING

Registered Marks on Sample

: 12/03/2013

Sampling Site

: Location : Kekrang Village, date : 13.02.2013 : Bagru/Bhusar/Hisn NewHisn Old Bauxile Mines(Bagru Plateau)

Test Start/End Date : 12/03/2013 - 18/03/2013

Analysis	Method	Result	Unii		ent/Limit as Per
Particulate Matter (PM10 )				Min	Max
	19:5182 (Part-23 ):2006	69	ug/m3		100
Particulate Matter (PM2.5)	USEPA CFR(40) Appendix-L	38.59	ug/m3	O.	60
Oxides of Nitrogen (NOx)	65:5182 (Part-6):1975 (Reaff:2004)	10.88	ugim3	*	80
Sulphur Dioxide (SO2) Carbon Monoxide	IS:5182 (Part-2):2001 (Reaff:2005)	<5.00	Em/gu	*	50
ark: CO Analyzed at site.	By NDIR Spectroscopy.	<0.10	PPM		

Page 1 of 2

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Penns & Care CVIII -5000 Houses, etc. A S. Manes, Verbreic (release Seurobs-M00088 Tel. -1022) 25789621 to 20 Feet -1022) 25796621 to 20 Feet -1022) 2579621 to 20 Feet -10220 to 20 Feet -10220 to 20 Feet -10220 to 20

SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Print Date : 18/03/2013

Report No : KG13-001940.002

JOE No : KG13-001940

Report Control No : KGH0000012034

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""End of Report""

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SAMPLE DRAWN BY SGS INDIA PVT. LTD.

Print Date : 18/03/2013

Report No : KG13-001940.001

JOE No : KG13-001940

Report Control No : KGR0000012034

Sample Described by Customer as : AMBIENT AIR QUALITY MONITORING

; Flindatco Industries Limited(Mines Division)

Client Name Client Address Postal Code State

: Lohardaga, : 835203

Jharkand India AMBIENT AIR QUALITY MONITORING

Country Sample Type Received Registered Marks on Sample

: 12/03/2013 : 12/03/2013

Sampling Site

: 12/03/2013 Location : Mine Lease Area, data : 13.02.2013 Bagnu/Bhusar/Hisri Newt-lisri Old Bauxile Mines(Bagru Platcau)

Test Start/End Date : 12/03/2013 - 18/03/2013

Analysis	Method	Result	Unit		rent/Limit as Per
Particulate Matter (PM10 )				Min	Max
	IS:5182 (Part-23 ):2006	85	Errigo		100
Particulate Matter (PM2.5)	USEPA CFR(40) Appendix-L	31.72	0.000		100
Oxides of Nitrogen (NOx)		2007	<b>Embu</b>	(87)	60
	IS:5162 (Part-6):1975 (Reaff 2004)	< 8 00	ugán3	17	80
Sulphur Dioxide (SO2)	IS:5182 (Part-2):2001 (Realf.2008)	<5 00	ug:m3		60
Carbon Monoxide ark : CO Analyzed at site	By NDIR Spectroscopy	<0.10	PPM		

### Page 1 of 2

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Repd & Core, Oil: 306 Notes: 60 A.S. Marcy, Venezia Mineral Busines-450083. Tel: (82) 72/724/001 to 35 notes: (92) 72/764/01 to 35 notes: 60 A.S. Marcy, Venezia Mineral Busines-450083. Tel: (82) 72/724/01 to 35 notes: (92) 72/764/01 to 35 notes: (9



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Print Date : 18/03/2013

Report No : KG13-001940.001

JOE No : KG13-001940

Report Control No : KGR0000012034

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Satya Manna Section Incharge - ENVI **Authorized Signatory** 

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Report No.: CA:GL:3120015211

DATE: 19/10/2012

JOE No.: 1212806597

Report Control No.:3125016394

SAMPLE DRAWN BY SGS INDIA PRIVATE LIMITED SAMPLE IDENTIFIED AS: AMBIENT AIR QUALITY MONITORING

CUSTOMER NAME

HINDALCO INDUSTRIES LIMITED (MINES DIVISION)

**ADDRESS** 

LOHARDAGA, JHARKHAND

CITY

835302

COUNTRY

INDIA

N.A.

SAMPLING METHOD SAMPLE DESCRIPTION

AMBIENT AIR QUALITY MONITORING

**MARK/LOCATION** 

SITE:BAGRU/BHUSAR/HISRI OLD/HISRI NEW/BAUXITE MINES(BAGRU PLATEAU) LOCATION:MINE LEASE AREA (CORE ZONE)

DATE:07.10.12 TO 08.10.12

SAMPLE RECD ON

11/10/2012

TEST START DATE

11/10/2012

TEST END DATE

19/10/2012

TESTS	PROTOCOL	RESULT	REQUIREMENT/LIMIT  As per CPCS  RESIDENTIAL AREA  MIN MAX
CARBON MONOXIDE (CO)	USEPA CHAPTER-2	< 0.1 ppm	MIN MAX 1.7ppm(8h)
OXIDES OF NITROGEN (NOx)	IS 5182 PART 6:2006	7.4 µg/m3	80 µg/m3
PARTICULATE MATTER(10)	IS:5182(PART 23)2006	94.8 µg/m3	100 µg/m3
PARTICULATE MATTER(2.5)	USPEA CFR40(50), Appendix L	42.9 µg/m3	60 µg/m3
SULPHUR DIOXIDE (SO2)	IS 5182:PART 2:2001	< 4.0 µg/m3	80 µg/m3

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J. A. Dale Asish Chakraborty Manager Laboratory

Page 1 of 1

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Rogd & Corp. Off. SGS House, 4B, A.S. Marg., Vikhroli (West), Mumbai-400083. Tel: (022) 25798421 to 28 Fax. (022) 25798431 to 35 www.sgs.com

Mamber of the SCS Group (SCS 2A)



Report No. : CA:GL:3120015212

JOE No.: 1212806597

DATE: 19/10/2012 Report Control No.:3125016395

SAMPLE DRAWN BY SGS INDIA PRIVATE LIMITED

CUSTOMER NAME

SAMPLE IDENTIFIED AS : AMBIENT AIR QUALITY MONITORING HINDALCO INDUSTRIES LIMITED (MINES DIVISION)

**ADDRESS** 

LOHARDAGA, JHARKHAND

CITY

835302

COUNTRY

INDIA

SAMPLING METHOD

SAMPLE DESCRIPTION

N.A AMBIENT AIR QUALITY MONITORING

MARK/LOCATION

SITE:BAGRU/BHUSAR/HISRI OLD/HISRI NEW/BAUXITE MINES(BAGRU PLATEAU) LOCATION: KEKRANG VILLAGE (BUFFER ZONE)

DATE:07.10.12 TO 08.10.12

SAMPLE RECD ON

11/10/2012

TEST START DATE TEST END DATE

11/10/2012 19/10/2012

TESTS	PROTOCOL	RESULT	REQUIREMENT/LIMIT  As per CPCB  RESIDENTIAL AREA MIN MAX
CARBON MONOXIDE (CO)	USEPA CHAPTER-2	< 0.1 ppm	1.7ppm(8h)
OXIDES OF NITROGEN (NOx)	IS 5182 PART 6:2006	4.5 µg/m3	80 µg/m3
PARTICULATE MATTER(10)	IS:5182(PART 23)2006	62.9 µg/m3	
PARTICULATE MATTER(2.5)	USPEA CFR40(50), Appendix L	32.1 µg/m3	100 µg/m3
SULPHUR DIOXIDE (SO2)	IS 5182:PART 2:2001	< 4.0 µg/m3	60 µg/m3 80 µg/m3

End of Report

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I. A. Dalla Asish Chakraborty Manager Laboratory

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Regd & Corp. Oil: SGS House, 4B, A.S. Marg, Vikhabi (West), Mumba: 400083 Tel: (022) 25798421 to 28 Fax: (022) 25798431 to 35 www.sqs.com

Mamba of the SGO Group (SGO SA)



Report No. : CA:GL:3120015213

JOE No.: 1212806597

DATE: 19/10/2012 Report Control No.:3125016396

SAMPLE DRAWN BY SGS INDIA PRIVATE LIMITED SAMPLE IDENTIFIED AS : AMBIENT AIR QUALITY MONITORING

CUSTOMER NAME

HINDALCO INDUSTRIES LIMITED (MINES DIVISION)

**ADDRESS** CITY

LOHARDAGA, JHARKHAND

835302

COUNTRY

INDIA

SAMPLING METHOD

N.A.

SAMPLE DESCRIPTION

AMBIENT AIR QUALITY MONITORING

**MARK/LOCATION** 

SITE:BAGRU/BHUSAR/HISRI OLD/HISRI NEW/BAUXITE MINES(BAGRU PLATEAU)

LOCATION: KORGO VILLAGE (BUFFER ZONE) DATE:08.10.12 TO 09.10.12

SAMPLE RECD ON

11/10/2012

TEST START DATE TEST END DATE

11/10/2012 19/10/2012

10/10/2012			
TESTS	PROTOCOL	RESULT	REQUIREMENT/LIMIT  As DOT CPCB  RESIDENTIAL AREA  MIN MAX
CARBON MONOXIDE (CO)	USEPA CHAPTER-2	< 0.1 ppm	1.7ppm(8h)
OXIDES OF NITROGEN (NOx)	IS 5182 PART 6:2006	5.3 µg/m3	80 µg/m3
PARTICULATE MATTER(10)	IS:5182(PART 23)2006	772 µg/m3	100 µg/m3
PARTICULATE MATTER(2.5)	USPEA CFR40(50), Appendix L	31.5 µg/m3	60 μg/m3
SULPHUR DIOXIDE (SO2)	IS 5182:PART 2:2001	< 4.0 µg/m3	80 un/m3

\*\*\*\* End of Report \*\*\*\*

80 µg/m3

per pro SGS India Private Ltd.

t. A. Raffa Asish Chakraborty Manager Laboratory

Page 1 of 1

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Report No. : CA:GL:3120015214

JOE No. : 1212806597

Report Control No.:3125016397 SAMPLE DRAWN BY SGS INDIA PRIVATE LIMITED

CUSTOMER NAME

SAMPLE IDENTIFIED AS : AMBIENT AIR QUALITY MONITORING HINDALCO INDUSTRIES LIMITED (MINES DIVISION)

**ADDRESS** 

LOHARDAGA, JHARKHAND

CITY

835302

COUNTRY

INDIA

SAMPLING METHOD

N.A.

SAMPLE DESCRIPTION

AMBIENT AIR QUALITY MONITORING

**MARK/LOCATION** 

SITE:BAGRU/BHUSAR/HISRI OLD/HISRI NEW/BAUXITE MINES(BAGRU PLATEAU)

LOCATION: SIYARPARA VILLAGE (BUFFER ZONE)

DATE:08.10.12 TO 09.10.12

SAMPLE RECD ON

11/10/2012

TEST START DATE

11/10/2012

TEST END DATE

19/10/2012

TESTS	TESTS PROTOCOL		REQUIREMENT/LIMI  As per CPCB  RESIDENTIAL ARE, MIN MAX	
CARBON MONOXIDE (CO)	USEPA CHAPTER-2	< 0.1 ppm	1.7ppm(8h)	
OXIDES OF NITROGEN (NOx)	IS 5182 PART 6:2006	8.3 µg/m3	80 µg/m3	
PARTICULATE MATTER(10)	IS:5182(PART 23)2006	87.0 µg/m3	100 µg/m3	
PARTICULATE MATTER(2.5)	USPEA CFR40(50), Appendix L	34.6 µg/m3	60 µg/m3	
SULPHUR DIOXIDE (SO2)	IS 5182:PART 2:2001	< 4.0 µg/m3	80 µg/m3	

\*\*\*\*\* End of Report \*\*\*\*

per pro SGS India Private Ltd.

DATE: 19/10/2012

J. A. Sulfa Asish Chakraborty Manager Laboratory

Page 1 of 1

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Report No. : CA:GL:3120011468

DATE: 10/08/2012

JOE No.: 1212805059

Control No.:3125012287

### SAMPLE COLLECTED BY SGS

SAMPLE IDENTIFIED AS : GROUND WATER

COMPANY NAME

HINDALCO INDUSTRIES LIMITED (MINES DIVISION)

**ADDRESS** 

LOHARDAGA, JHARKHAND

835302

SAMPLING METHOD

**APHA 1060B** 

SAMPLE DESCRIPTION

**GROUND WATER** IN PLASTIC BOTTLE

SAMPLE CONDITION AMPLE QTY.

7L APP

MARKS ON SAMPLE

**COLLECTED ON** 

LOCATION: CHAPPY VILLAGE OPEN WELL - I 31.07.2012, TIME: 2.30 PM

REGISTERED ON

. 02/08/2012

8/2012 8/2012

TEST START DATE	02/08
TEST END DATE	10/08

TESTS	TESTS PROTOCOL F		REQUIREMENT/LIMIT <u>As per IS</u> 10500:1991(REAFF  1993)  Desirable Permissible	
ALKALINITY (as CaCO3)	IS 3025:PART 23 :1986(Reaff.1998)	7.53 mg/l	200mg/l	600mg/l
ALUMINIUM (as Al)	IS 3025 : Part 55 : 2003	0.09 mg/l	0.03mg/l	0.2mg/l
ANIONIC DETERGENTS (as MBAS)	ANNEX. K of IS 13428: 2005	<0.05 mg/l	0.2mg/l	1mg/l
ARSENIC (as As)	IS 3025:PART 37:1988(Reaff.1999)BY ICPOES	<0.005 mg/l	0.01mg/l	No Relax.
BORON	Annex.H OF IS:13428:2005	<0.05 mg/l	1.0mg/l	5.0mg/l
CADMIUM (as Cd)	IS 3025:PART 41 :1992(Reaff.1998)BY ICPOES	<0.005 mg/l	0.01mg/l	No Relax.

### Page 1 of 4

of the law.
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Report No.: CA:GL:312001	1468	DATE: 10/08/2012			
JOE No. : 1212805059	Control No.:3125012287				
TESTS	PROTOCOL	RESULT	10500:19	MENT/LIMIT DOT IS 91(REAFF 193) Permiss ible	
CALCIUM (as Ca)	IS 3025:PART 40 :1991(Reaff.2003)	2.66 mg/l	75mg/l	200mg/l	
CHLORIDE ( as CI)	Clause 2 of IS 3025 Part 32:1988(Reaff. 1999)	7.15 mg/l	250mg/i	1000mg/l	
CHROMIUM (Cr6+)	IS 3025:PART 52:2003	<0.01 mg/l	0.05mg/l	No Relax.	
COLOUR ( HAZEN UNITS)	IS 3025:PART 4 :1983(Reaff.2002)	5	5.0	25	
COPPER	IS 3025: PART 42:1992(Reaff. 2003) BY ICPOES	<0.01 mg/l	0.05mg/l	1.5mg/l	
CYANIDE ( as CN)	IS 3025:PART 27 :1986(Reaff.1998)	<0.02 mg/l	0.05mg/l	No Relax	
E.coli	IS 1622:1981(Reaff.2003)	Absent/100ml		ABS/100m	
FLUORIDE	IS:3025(PART 60):2008	<0.10 mg/l	1.0mg/l	1,5mg/l	
IRON ( as Fe)	IS 3025:PART 53:2003 (BY ICPOES)	0.07 mg/l	0.3mg/l	1 mg/l	
LEAD (as Pb)	IS 3025:PART 47:1994(Reaff.2003) BY ICPOES	<0.005 mg/l	0.05mg/l	No Relax	
MAGNESIUM ( as Mg)	IS 3025:PART 46 :1994(Reaff.1999)	<1.0 mg/l	30mg/i	100mg/i	
MANGANESE	IS:3025(PART 59) 2006	<0.01 mg/l	0.1mg/l	0.3mg/l	
MERCURY (as Hg)	IS 3025:PART 48 :1994(Reaff.1999)BY ICPOES	<0.001 mg/l	0.001mg/l	No Relax	

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Report No.: CA:GL:312001	1468	DATE: 1	DATE: 10/08/2012		
JOE No. : 1212805089	Control No.:3125012287				
TESTS	PROTOCOL	RESULT	10500:19	MENT/LIMIT ber iS 91(REAFF 93) Permissible	
MINERAL OIL	CLAUSE 6 OF IS 3025:PART 39:1991(Reaff, 2003)	BDL(DL-0.01 mg/l)	0.01mg/l	0.03mg/l	
NITRATE	IS 3025:PART 34 :1988(Reaff.1999)	6.05 mg/l	45mg/i	No Relax	
ÓDOUR	IS 3025:PART 5:1983(Reaff.2002)	Unobjectionable	Unobject.	Unobject	
pH	IS 3025:PART 11:1983(Reaff.2002)	7.1 *	6.5-8.5	No Relax	
PHENOLIC COMPOUNDS (as C61	15OH) IS 3025(Part 43)1992(Reaff 2005)	<0.001 mg/l	0.001mg/l	0.002mg/	
RESIDUAL FREE CHLORINE	GEN/SOP/CALLAB-13	<0.10 mg/l *	0.2mg/l	**	
SELENIUM	IS 3025:PART 56:2003 (BY ICPOES)	3 <0.005 mg/l	0.01mg/l	No Relax	
SULPHATE	CLAUSE 4 OF IS 3025:PART 24:1986(Reaff. 2003	<2.0 mg/l	200mg/l	400mg/l	
TASTE	IS 3025:PART 7 :1984(Reaff.2002)	Agreeable	Agreeable	•	
Total Coliforms	IS 1622:1981(Reaff.2003	<2 MPN/100ml	*	10/100 m	
TOTAL DISSOLVED SOLIDS	IS 3025:PART 16:1984(Reaff.2002)	37 mg/l	500mg/l	2000mg/	
TOTAL HARDNESS (as CaCO3)	IS 3025:PART 21 :1983(Reaff.2002)	9.50 mg/l	300mg/l	600mg/l	
TURBIDITY( In NTU )	IS 3025:PART 10 :1984(Reaff.2002)	8.20	5.0NTU	10NTU	

### Page 3 of 4

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झारखण्ड राज्य प्रदूषण नियंत्रण पर्वद्

JHARKHAND STATE POLLUTION CONTROL BOARD

[ CONSTITUTED UNDER SECTION 4 OF THE WATER (PREVENTION & CONTROL OF POLLUTION ACT, 1974 ]

T.A.DIVISION BUILDING (GROUND FLOOR), HEC COMPEX, DHURWA, RANCHI-834004.

Phone No:-0651- 2400852, 2400851, Fax No:-2400850.

Ref.No- PC/RNC/170/08-

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Da	f-m		
1.Ja	LC	 	

# **CONSENT TO OPERATE**

With reference to the application dated 28.08.2012 of G.M. (Operation), M/s Hindalo Industries Ltd; Court Road, I/C Hisri New Bauxite Mines-14.55 Ha, P.O+Dist-Lohardaga for consent under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and that under section 21 of the Air (Prevention & Control of Pollution), Act, 1981, he (they) is (are) granted consent to bring into use his(their) new/altered/existing outlet(s) for discharge of trade effluent and (or) domestic sewage and to operate his (their) industrial plant to produce maximum 1,00,000 TPA of Bauxite At – Hisri New, P.O + Dist-Lohardaga for the period from 01.01.2013 to 31.12.2013 with the following conditions:

- 1. That, he(they) shall not make any alteration, addition, deletion or modification in the mines without the prior clearance from the Board.
- That, he(they) shall abide by the obligations provided under section 24, 31 and 33A of the Water (Prevention & Control of Pollution) Act, 1974 and shall extend co-operation to the Board in performing its functions entrusted under section 20, 21, 23, 30 and 32 of the Act.
- That, he(they) shall comply with the requirements of the Water (Prevention & Control of Pollution)
   Cess Act, 1977 read with the Water (Prevention & Control of Pollution) Cess Rules, 1978.
- 4. That, he(they) shall abide by the obligations provided under section 22, 23 and 31A of the Air (Prevention & Control of Pollution) Act, 1981 and shall extend co-operation to the Board in performing its functions entrusted under sections 24, 25 and 26 of the Act.
- 5. That, he(they) shall abide by the obligations provided under sections 5, 7, 8 and 9 of the Environment (Protection) Act, 1986 and shall extend co-operation in performing the functions entrusted under section 3, 10 and 11 of the Act.
- 6. That, he(they) shall abide by the applicable provisions of the Environment (Protection) Rules, 1986, the Hazardous Wastes (Management, Handling & Transboundry Movement) Rules, 2008; the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989; the Bio-medical Waste (Management & Handling) Rules, 1998; the Municipal Solid Wastes (Management & Handling) Rules, 2000 and the Batteries (Management & Handling) Rules, 2001.
- That, he(they) shall maintain the quality of discharge and (or) emission and (or) noise level of
  environmental pollutants in conformity with the standards as laid under Rule 3 of the Environment
  (Protection) Rules, 1986.
- That, he(they) shall monitor his(their) effluent(s), emission(s) and the ambient air, noise level regularly and shall submit the report to the Board in compliance of the condition laid in paragraph7.

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- That, he(they) shall establish well equipped environmental laboratory with the facilities of 9. system(s) of continuous monitoring of effluent(s), emission(s) ambient water quality(ies), ambient air quality(ies) and ambient noise level(s) and transferring them (monitoring results) to his(their) website(s) and to the e-mail address(es) of the key persons of Jharkhand State Pollution Control Board, Zonal Office, Kolkata and Ministry of Environment & Forests, Regional Office, Bhubaneswar with simultaneous displaying at prominent locations in front of his(their)premises. [\*Unit(s) of medium and large scale under 17 categories of polluting industries of category A of EIA Notification, 2006.]
- That, he(they) shall submit the environmental statement every year by 30th September and shall 10. harvest all rain water precipitating in the premises and do three tier tree plantation in the premises as air barrier.
- That, he(they) shall submit application for consent under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and that under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 again 120 days before the expiration of the consent order 31.12.2013 or within 120 days from the date of receipt of the order, whichever is earlier.
- 12. That, unit shall submit quality report of Ambient Air Quality and Ground Water Quality every quarter of the year.
- That, unit shall submit the status of compliance Environmental Clearance every quarter to the 13.
- That, unit) shall reclaim the mined out area in phased manner as per EIA/EMP report. 14.
- That, the unit shall implement harvest rain water of the mine and recharge it to the ground by the method of Central Ground Water Board Guideline that fits most to the mine.
- 16. That, the unit shall make arrangement to control the fugitive emissions occurring during the mining activities and plying of vehicles on haul as well as transport roads.
- That, the unit shall ensure that no transport vehicle should ply on road without covering the materials.
- That, the proponent shall submit compliance report of Environmental Clearance dated 17.06.2011 18. and submit photographs in compliance of special condition No. WH and IX of the same. THE CONDENT

Sd/-

(Sanjay Kumar Sinha) MEMBER SECRETARY

Memo no. PC/RNC/170/08- 16-340

Ranchi, Dated .....31:113

Copy forwarded to:- G.M. (Operation), M/S Hindalco Industries Ltd; (I/C Hisri New Bauxite Mines-14.55 Ha.), Court Road, P.O+Dist- Lohardaga/ Deputy Commissioner, Lohardaga/ D.F.O, Ranchi West Forest Division, Lohardaga/ D.M.O, Lohardaga/ Regional Officer, Regional Office, Ranchi for information & necessary action.

MEMBER SECRETARY



# BREAK UP THE COST OF ENVIRONMENTAL MEASURES DURING THE YEAR 2012-13

The composite cost during the year 2012-13 (April to March) for environmental protection & pollution control by Jharkhand Mines division of Hindalco Industries Ltd for implementation 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) and Bagru (75.41 Ha), Hisri, Chiro kukud, & Orsa pat.

Description	Budget (in Lakh Rs.)	Actual (in Lakh Rs.) FY 2012-2013
Pollution Control & Environment monitoring	7.50	11.32
Reclamation/ Back filing & Rehabilitation	**	46.60
Green belt & Plantation	25.00	88.09
Rural Development	65.00	81.50
	Pollution Control & Environment monitoring  Reclamation/ Back filing & Rehabilitation  Green belt & Plantation	Pollution Control & Environment 7.50 monitoring  Reclamation/ Back filing & ** Rehabilitation  Green belt & Plantation 25.00

<sup>\*\*</sup>part of OB removed cost.

Convener

**Environment Management Cell.** 



Date:20.03.13

### **OFFICE ORDER**

In connection with the earlier office order dated 12.11.2011 the re constituted team of Environment management cell to ensure compliance of various environmental Acts, regulations & rules at Mines Division, Hindalco, Lohardaga as follows:

The Environment Management Cell will consist of:

1. B. K. Mahapatra, AGM (Quality & Environment), Convenor.

### Members:

- 2. Utpal Gupta, Manager (Environment)
- 3. Biplab Mukherjee (Asst Manager Geology)
- 4. S. Joshi, Manager (Bagru Mines)
- 5. A. Anbarasu, Mines Manager (Serengdag A)
- 6. Ajay Pandey, Mines Manager (Pakhar)
- 7. Kiran Sankar Singh, Mines Manager (Gurdari)
- 8. Vidya Sagar Singh, Mines Manager (Serengdag B)
- 9. Ashish Upadhyay, Mines Manager (Kujam I & II)
- 10.Amar Bharati, Mines Manager (Amtipani)
- 11. Monaj Kumar Singh, Mines Manager (Pakhar 109.507 Ha)
- 12. Rajesh Ambastha, Mines Manager (Chiro Kukud & Orsa)

By order

Bijesh Kumar Jha
VP (Mines)

Cc to: - All Mines Manager All Department head Notice Board.

# DETAILS OF PRODUCTION, OVERBURDEN HANDLING, AREA MINED OUT AND AREA RECLAIMED FROM APR-12 TO MAR-13

NS	Name of Leases	Lease Area (in Ha)	Production (in MT)	Overburden Handling (in MT)	Mined Out Area (in Acres)	Reclaimed Area (in Acres)
1	Pakhar Bauxite Mines	8.09	78470	51682	0.75	1.10
2	Pakhar (115.13)	115.13	208503	425872	7.42	2.42
ω	Gurdari	584.19	324648	832640	14.70	24.80
4	Kujam-l	80.87	149018	158530	14.70	12.10
5	Kujam-II	157.38	149542	677633	18.18	11.41
6	Amtipani	190.95	149579	468731	18.02	15.37
7	Shrengdag	155.81	259630	570878	19.50	35.00
00	Serengdag Bauxite Mines	140.06	99772	133089	6.52	5.80
9	Jalim & Sanai	12.14	49505	34438	1.24	0.80
10	Bagru	75.41	84320	188767	1.78	9.69
11	Hisri New	14.55	99651	115676	1.24	0.00
12	Chiro-Kukud	152.57	64847	78598	3.13	5.37
M/s Mine	M/s Minerals & Minerals Limited					
ב	Pakhar Bauxite Mines	15.58	34445	115848	1.25	2.00
2	Pakhar (109.507)	109.507	99840	204868	6.76	1.92