भारत सरकार
GOVERNMENT OF INDIA
पर्यावरण, वन एवंजलवायुपरिवर्तनमंत्रालय
MINISTRY OF ENVIRONMENT, FORESTS
& CLIMATE CHANGE

Regional Office (WCZ)
Ground Floor, East Wing
New Secretariat Building
Civil Lines, Nagpur - 440001
apccfcentral-ngp-mef@gov.in

F. No: 3-50/2008(Env) Dated: 14th March, 2017

To

The Scientist 'E'
IA Division (Coal Mining),
Ministry of Environment, Forest & Climate Change
Vayu Wing, 3rd Floor, Indira Paryavaran Bhawan,
Aliganj, Jorbagh Road,
New Delhi-110003

(Kind Attention: Shri S. K. Srivastava)

Sub: A report on the status of compliance of conditions stipulated in the environment clearance dated 26.10.2010 accorded by the MOEF&CC, New Delhi in respect to Mainpat Bauxite mines of M/S BALCO in Sarguja District in the State of Chhattisgarh – regarding.

Ref: Project Proponent's letter no. BALCO.ENVT/A-04@/423 dated 26.11.2016.

Sir,

I am directed to refer to the above subject and letter under reference above wherein the Project Proponent has requested the Regional Office to conduct a site visit to monitor the status of compliance of conditions stipulated in the environment clearance dated 26.10.2010. In this connection, it is to inform that a visit for the monitoring of compliance of conditions stipulated in the environment clearance dated 26.10.2010 has been conducted by Scientist'C' of the Regional Office on 17.01.2017. Major findings during the monitoring are given as under:

Specific conditions complied with partially by the PP

i. Condition no. (i) No black topping was observed in the main haul road in the mining lease.
ii. Condition no. (iv) It is also observed that mined out areas are being backfilled concurrently. Since bauxite ore is available at a depth of only 8-10 meters below ground level, no dumps are kept active for long period. No practice of reclaiming the dumps by geo-textile sheet was observed. Retaining walls was observed to be constructed at the foot of new dumps, however, no retaining walls were observed to be provided for old dumps to arrest flow of silt.
iii. Condition no. (v) It is observed that considerable number of of check dams have been constructed and catch pits /sedimentation pits have been provided at the end of the garland drains to arrest the silt. The catch pits/sedimentation pits are de-silted on regular basis. However, garland drains were not constructed for all dumps as some of the dumps were observed without garland drain. Management of existing garland drains was also observed poor as the measures like de-silting of the catch drains was not observed to be undertaken by the PP.
iv. Condition no. (vii) No full time doctor for occupational health was observed to be deputed by the PP, though the PP has made provisions for doctor on temporary basis. It is informed that occupational health hazards issues have been identified and appropriate safety measures to mitigate these hazards are being practiced. However, no details pertaining to the mitigative hazards measures was made available by the PP.

v. Condition no. (xiii) It is observed that regular monitoring of ground water and surface water is carried out and reports are submitted to all concerned. However, no details pertaining to the monitoring of surface water was made available by the PP.

General conditions complied with partially by the PP

i. Conditions no. (vi) - Details of data pertaining to the control of noise levels below 85 Dba has not been made available by the PP.

ii. Condition no. 8 - No details pertaining to the protective respiratory devices provided to the personnel working in dusty areas has been provided by the PP.

Conditions not complied with by the PP

i. General condition no. (v) - No water spraying arrangements on haul roads, loading and unloading and at transfer points were observed to be provided by the PP.

This issues with the approval of the Addl. PCCF (Central), Regional Office (West Central Zone) MoEF&CC, Nagpur.

Encl: as above

Yours faithfully,

A. Suresh Kumar 14/03/17

Suresh Kumar Adapa
Scientist 'D'

Copy to:

1. Director RO HQ, Ministry of Environment, Forest & Climate Change, Government of India, 1st Floor Agni Wing, Indira Paryavaran Bhawan, Jorbagh Road, New Delhi- 110 003.
2. Member Secretary, State Level Environment Impact Assessment Authority & Secretary, Housing and Environment Department, Government of Chhattisgarh, Mantralay Mahanadi Bhavan, New Raipur, Chhattisgarh
3. Director (Monitoring Cell), Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Aliganj, Jorbagh Road, New Delhi-110003
4. Head –HSE, Bharat Aluminium Co Ltd, Balco Nagar, Korba, Chhattisgarh – 495684
5. Guard File.

A. Suresh Kumar 14/03/17

Suresh Kumar Adapa
Scientist 'D'

Monitoring the Implementation of Environment Safeguards
Ministry of Environment, Forests and Climate Change

West Central Zone, Regional Office, Nagpur
MONITORING REPORT
PART-I
DATA SHEET

1.	Project Type: River-Valley/ Mining/ Industry/ Thermal/Nuclear/ Others (Specify)	: Mining
2.	Name of the project	: Mainpat Bauxite Mines; (Kesra, Kudaridih, Sapnadar)
3.	Clearance Letter (s)/OM No. and date	: F. No. J-11015/235/2007.IA-II (M) Dated 27th October 2015.
4.	Location	
	a) District (s)	: Surguja
	b) State (s)	: Chhattisgarh
	c) Location Latitude/ Longitude	: Kesra: 22°46'14.49" to 22°47'13.34" N 83°14'26.50" to 83°15'58.80" E Kudaridih: 22°46'03.79" to 22°48'40.26" N 83°16'46.91" to 83°18'10.83" E Sapnadar: 22°51'05.73" to 22°52'7.36" N 83°17'14.06" to 83°18'17.83" E
5.	Address for correspondence	: Shri Afroz
	a) Address of the Concerned Project Chief Engineer (with Pin Code & telephone/ telex/ fax Numbers)	: Head- Mines Bharat Aluminium Company Ltd. BALCO Nagar Korba, Chhattisgarh – 495684 Phone/Fax No 07759-242031
	b) Address of the Executive Project Engineer/ Manager (with Pin Code & telephone / telex/Fax Numbers)	: Shri Ajay Tiwari Manager Mines Bharat Aluminum Company Ltd P O Balco Nagar Korba, Chhattisgarh -495684 Phone /Fax No. 07759-242139
6.	Salient Feature	
	a) Of the Project	: Mainpat Bauxite Mines had operating since 1993 to 08th July 2012. After expiry first term of mining Lease on 08th July 2012 mining lease has been extended up to 08th July, 2042 as per MMDR Amendment Act, 2015.

b) Of the Environment Management Plan Check	: Plantation, Reclamation, Retaining Wall, Dams and rain water harvesting pits are provided at site.
7. Breakup of the Project Area	
a) Submergence area : Forest & non - Forest	: NA
b) Others	: Total M L Area; 639.169 ha. Revenue Forest Land: 376.924 ha. Govt. Rocky Land: 40.107 ha. Private Land: 222.138 ha.
8. Breakup of the project affected population previously with enumeration of those losing houses/ dwelling unit agriculture land only both dwelling units & agriculture land & landless laborers/ artisan:	: The only 222.138 ha private land was used for agricultural purpose. There were no dwelling units/ house exiting at present.
a) SC, ST/ Adivasi	: Land loosing 60 & House loosing 9
b) Others	: Land loosing 45 and house loosing 5 (Total 90 No of PAF's)
(Please indicate whether these figure are based on any scientific and systematic survey carried out or only provisional figure , if a survey is carried out give detail & year of survey)	: As per govt. revenue record
9. Financial Detail Project cost as originally planned and subsequent revised estimates and the year of price reference	: Rs 1100 Lakh
a) Allocation made for environmental management plan with item wise and year wise break-up	: Capital Cost-Rs 38.50 Lakh
b) Benefit cost ratio/ Internal rate of Return and the year of Assessment	: 1:3.5
c) Whether © includes the cost of environmental management as shown in the above	: No
d) Actual expenditure incurred on the project so far	: Rs. 1100 Lakh
e) Actual expenditure incurred on Environmental	: Rs. 9.67 Crores (up to 31st March 2016)
f) Management Plan so far dams & its conservation)	(GB Management, construction of check Maintenance, garland drain and wild life
10. Forest land requirement	
a) The status of approval for diversion of forest land for non-forestry use obtained vide	: Diversion of 376.924 ha has already 8-31/97-FC, New Delhi dated 24.05.2000 and its Validity is up to 8th July 2012. Further after renewal of Mining lease till 8th July, 2042 Forest Clearance validity was also extended up to 8th July, 2042.

2042 Forest Clearance validity was also extended up to 6th July, 2042.

b) The status of clearing felling permission at : We obtained total 2456 nos tree felling

(Kesra, Kudaridih & Sapanadar) out of which only 1589 nos tree has been felling

c) The status of compensatory locations of : About 1507.696 Ha area at different

Chhattisgarh State has already been planted under provisions of compensatory afforestation has been already done afforestation if any

d) Comments on the viability & sustainability of compensatory afforestation program in the light of actual field experience so far : NA

11. The status of clear felling in non-forest area (such as submergence area or reservoir approach Roads), if any with quantitative information required : NA

12. Status of construction (Actual &/ or planned)
    a) Date of Commencement (Actual & / or planned) : March 1993
    b) Date of Completion (Actual &/or planned): Already in Place

13. Reason for the Delay the Project is yet to start : Project is Operational

*****

PART-II

A REPORT ON THE STATUS OF COMPLIANCE OF CONDITIONS STIPULATED IN THE ENVIRONMENT CLEARANCE DATED 26.10.2010 ACCORDED BY THE MOEF&CC, NEW DELHI IN RESPECT TO MAINPAT BAUXITE MINES OF M/S BALCO IN SARGUJA DISTRICT In THE STATE OF CHHATTISGARH

The Mainpat bauxite mine of M/s BALCO **in Sarguja District in** the state of Chhattisgarh had been accorded environment clearance by Ministry of Environment, Forests and Climate Change, New Delhi vide letter no. **No.J-11015/235/2007-IA.II (M) Dated: 26th October 2010 and further extension received for Environmental Clearance vide letter dated 27/10/2015**

M/s BALCO has two captive Bauxite mines in the State of Chhattisgarh viz. Mainpat Bauxite mine with production capacity 7,50,000 TPA in Surguja District and at Bodai Daldali (Kawardha) with production capacity of 12,50,000 TPA. Mainpat bauxite mine is located at an elevated plateau. Area is flat and covered with soil/ lateritic boulders. The Bauxite ore is available as pocket deposit with 1.5 metre average thickness and is normally available below 8-10 meters from ground level.

A monitoring report on the status of compliance of conditions stipulated in the environment clearance is given as under:

A, Specific Conditions:

S.No.	Condition	Compliance status
i	Maintenance of village roads through which transportation of ore is undertaken shall be carried out by the company regularly at its own expenses. The roads shall be black topped.	**Partially complied with** It is observed that village road through which ore transportation takes place is being maintained by BALCO. However, no black topping was observed in the main haul road.
ii	Rain water harvesting shall be undertaken to recharge the ground water. Status of implementation shall be submitted to the Regional Office of the Ministry within six months and thereafter every year from the next consequent year.	**Complied with** It is observed that two mined out pits have been developed as water bodies to recharge the ground water. However, rainwater harvesting measures needs to be strengthened in the township area. The PP has submitted a status of implementation of rainwater harvesting structure in the compliance report submitted to the Regional Office and the same is enclosed at **Annexure-I**.
iii	Ground water in the core zone shall be regularly monitored for depletion and contamination due to mining activity and mitigation measures undertaken to prevent adverse affects.	**Complied with** It is observed that three Piezometric wells have been constructed and the water quality being monitored regularly for the depletion and contamination. It is also observed that open cast mining of bauxite is being done upto a depth of 8-10 meters from the surface. Ground water level being existing at far below level of mining, no intersection of the mining operations with the ground water level was observed. A report of the ground water monitoring is

		enclosed at **Annexure –II**.
iv	Measures for prevention and control of soil erosion and management of silt shall be undertaken. Protection of dumps against erosion shall be carried out with geo-textile matting or other suitable material, and thick plantations of native trees and shrubs shall be carried out at the dump slopes. Dumps shall be protected by retaining walls.	**Partially complied with** It is observed that mining operations have been resumed recently and the PP has been implementing the soil conservation measures in the mined out area in the form of retaining walls, gabion structures, garland drains, etc. It is also observed that mined out areas are being backfilled concurrently. Since bauxite ore is available at a depth of only 8-10 meters below ground level, no dumps are kept active for long period. No practice of reclaiming the dumps by geo-textile sheet was observed. Retaining walls was observed to be constructed at the foot of new dumps, however, no retaining walls were observed to be provided for old dumps to arrest flow of silt. The PP has considerably reclaimed the dump by planting native species.
v	Trenches / garland drains shall be constructed at foot of dumps and coco filters installed at regular intervals to arrest silt from being carried to water bodies. Adequate number of Check Dams and Gully Plugs shall be constructed across seasonal/perennial nallahs (if any) flowing through the ML area and silts arrested. De- silting at regular intervals shall be carried out. Garland drain of appropriate size, gradient and length shall be constructed for both mine pit and for waste dump and sump capacity shall 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 shall also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and de-silted at regular intervals.	**Partially complied with** It is observed that considerable number of of check dams have been constructed and catch pits /sedimentation pits have been provided at the end of the garland drains to arrest the silt. The catch pits/sedimentation pits are de-silted on regular basis. However, garland drains were not constructed for all dumps as some of the dumps were observed without garland drain. Management of existing garland drains was also observed poor as the measures like de-silting of the catch drains was not observed to be undertaken by the PP.
vi	Water to be supplied for drinking purposes shall be treated to meet the prescribed standards. Monitoring of water quality for drinking shall be undertaken on daily basis especially for fluoride & arsenic and records maintained.	**Complied with** It is observed that requirement of drinking water is met from the bore wells and water quality is being monitored regularly for fluoride and arsenic contents. A report on the same is enclosed at **Annexure –III.**
vii	Occupational health and safety measures for the workers including identification of work related health hazards, training on	**Partially complied with** No full time doctor for occupational health was observed to be deputed by the PP, though the PP

	malaria eradication, HIV, and health effects on exposure to mineral dust etc. shall be carried out. The company shall engage a full time qualified doctor who is trained in occupational health. Periodic monitoring for exposure to respirable mineral dust on the workers shall be conducted and records maintained including health records of the workers. Awareness programme for workers on impact of mining on their health and precautionary measures like use of personal equipments etc. shall be carried out periodically. Review of impact of various health measures undertaken (at interval of five years of less) shall be conducted followed by follow up action wherever required.	has made provisions for doctor on temporary basis. It is informed that occupational health hazards issues have been identified and appropriate safety measures to mitigate these hazards are being practiced. However, no details pertaining to the mitigative hazards measures was made available by the PP. It is also informed by the PP that various camps on waterborne diseases, HIV and health effects on exposure to mineral dust have been organized from time to time. Periodic monitoring and health check-ups are carried out and records are maintained. Onsite and off-site awareness trainings on work related aspects and use of personal protective equipments (PPEs) to employees and workers are given on regular basis. Details are not made available by the PP.
viii	Top soil and solid waste shall be stacked properly with proper slope and adequate safeguards and shall be utilized for backfilling (wherever applicable) for reclamation and rehabilitation of mined out area.	**Complied with** No separate areas for stacking of the top soil have been observed. However, it is also observed that with the advancement of mining operations and concurrent backfilling, the top soil, stacked temporarily on dumping site itself, is being used for reclamation of the dump.
ix	Over burden (OB) shall be stacked at earmarked dump site(s) only and shall not be kept active for long period. The maximum height of the dump shall not exceed 30 m, each stage shall preferably be of 10 m and overall slope of the dump shall not exceed 28°. The OB dump shall be backfilled. The OB dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests on six monthly basis.	**Complied with** It is observed that the sufficient mined out area is available with the PP and overburden excavated is being dumped directly for concurrent backfilling and subsequent reclamation. Details of plantations undertaken by the PP are given at **Annexure-IV**.
x	Slope of the mining bench and ultimate pit limit shall be as per the mining scheme approved by Indian Bureau of Mines.	**Being Complied with** Bench height is observed to be less than 10 meters. Maintenance of slope is not required as the mineral are available only at a depth of 8-10 meters.
xi	Drilling (if any) shall be conducted by using dust extractors/wet drilling. Controlled blasting shall be undertaken.	**Being complied with** It is observed that wet drilling methods are being adopted by the PP to control the dust and controlled blasting is being practiced.

xii	Green belt development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO / Agriculture Department. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. The density of the trees shall be around 2500 plants per ha. The company shall involve local people with the help of self help group for plantation programme. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the Regional Office of the Ministry every year.	**Complied with** It is observed that PP has already developed consideration area of green belt in their lease area and plantation programmed for green belt development are still being undertaken by the PP annually with the native trees and fruit bearing species with the involvement of local people. Detail of year wise plantation carried by the PP in their lease area is given at **Annexure –IV**.
xiii	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall 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 shall be regularly sent to MoEF, Central Ground Water Authority and Regional Director, Central Ground Water Board.	**Partially complied with** It is observed that regular monitoring of ground water and surface water is carried out and reports are submitted to all concerned. However, no details pertaining to the monitoring of surface water was made available by the PP A latest report containing the monitoring of ground water and surface water is given at **Annexure – V.**
xiv	The waste water from the mine shall be treated to conform to the prescribe standards before discharging in to the natural stream. The discharged water from the Tailing Dam (if any) shall be regularly monitored and report submitted to the Ministry of Environment & Forests, Central Pollution Control Board and the State Pollution Control Board.	**Complied with** It is observed that no waste water is generated from the mining operations.
xv	Prior permission from the competent authority shall be obtained for extraction of ground water, if any.	**Complied with** Permission has been obtained by the PP from the competent authority for extraction of ground water and the same is available at Annexure– VI
xvi	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of ores and others shall have valid permissions as prescribed under Central Motor Vehicle Rules, 1989 and its amendments. Transportation of ore shall be done only during day time. The vehicles transporting ores shall be covered with a tarpaulin or other suitable	**Complied with** The PP has informed that Pollution under Control Certificate is verified for all the ore transporting vehicles and tarpaulin cover is ensured. Overloading of ores is not allowed. The submission made by the PP were verified during inspection and observed to be appropriate.

	enclosures so that no dust particles / fine matters escape during the course of transportation. No overloading of ores for transportation shall be committed.	
xvii	Progressive reclamation of the mined out area shall be undertaken inconformity with the approved mine plan. A final mine closure plan, along with details of Corpus Fund, shall be submitted to the Ministry of Environment & Forests, 5 years in advance of final mine closure for approval.	**Complied with** It is observed that concurrent backfilling thereafter, it technical and biological reclamation is being carried out by the PP. the PP has also informed that reclamation is being carried out as per the approved Mine plan and a progressive Mine Closure Plan has already been submitted to MoEF, New Delhi. It is also observed that presently PP has Mine plan & Progressive mine closure plan for next five year 9th July 2012 to 2017 duly approved by IBM.
xviii	The critical parameters such as RSPM (Particulate matter with size less than 10micron i.e. PM10) and NOx in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged 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.	**Complied with** It is observed that Ambient Air Quality, peak particle velocity and water quality are being monitored on regular basis by the PP. The reports for AAQ & water quality is uploaded to the company's website. A monitoring report on the ambient air quality is enclosed at **Annexure – VII.** Web link of the PP's company i.e. http://balcoindia.com/sustainability/pdf/MainpatMines.pdf at as accessed on 24.02.2017 at 12.32 PM revealed that regular updating of the data on the website of the company is not being done by the PP. The AAQ reports uploaded on the website pertains to the May 2016.
xix	The project proponent shall obtain Consent to Establish and Consent to Operate from the Chhattisgarh Environment Conservation Board and effectively implement all the conditions stipulated therein.	**Complied with** It is observed that Consent To Operate has been obtained and renewed vide letter no 3240&3242/TS/CECB/2016 Raipur 2/09/2016. The CTO is valid upto 27/08/2017. A copy of the letter dated CECB dated 2.06.2016 containing the approval for extension of the CTO is enclosed at **Annexure-VIII.**
xx	The environmental clearance is subject to the condition, if any, stipulated by the IBM on the mining scheme submitted by the project proponent for its approval.	**Being Complied with.**

B. General Conditions:

S.No.	Condition	Compliance
i.	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment & Forests.	**Being complied with**
ii.	No change in the calendar plan including excavation, quantum of bauxite and waste shall be made.	The PP has consented to this condition.
iii.	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for RPM, SPM, SO_2 and NO_x monitoring. Location and number of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	**Complied with** It is observed that four ambient air quality monitoring stations have been established in the core zone as well as buffer zone for monitoring of RPM, SPM, SO_2 and NO_x. The PP has informed that location of ambient air quality monitoring stations has been finalized in consultation with State Pollution Control Board.
iv.	Data on ambient air quality RSPM (Particulate matter with size less than 10micron i.e. PM10) & NOx should be regularly submitted to the Ministry of Environment and Forests including its Regional office located at Lucknow and the State Pollution Control Board / Central Pollution Control Board once in six months.	**Being Complied with** The PP has been submitting the Ambient Air Quality monitoring reports regularly to the Regional Office. A copy of reports containing the monitoring reports on the AAQ is enclosed at **Annexure – VII.**
v.	Fugitive dust emission from all the sources shall be controlled regularly. Water spraying arrangements on haul roads, loading and unloading and at transfer points shall be provided and properly maintained.	**Not complied with** No water spraying arrangements on haul roads, loading and unloading and at transfer points were observed to be provided by the PP. However, PP has informed that dust generated from haul roads, loading and unloading and at transfer points etc., is controlled by regular water sprinkling. Fugitive dust emissions are regularly monitored and data are maintained. Water sprinkling system over fixed structure will be installed of adequate capacity, over crusher screening plant and mineral transfer points.
vi.	Measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. shall be provided with ear plugs / muffs.	**Partially complied with** The PP has informed that proper maintenance of equipments are regularly carried for keeping the noise within permissible limit. Operator cabins have been provided. Controlled blasting and other measures are taken for control of noise levels below 85 dBA in the work environment. Ear plugs and muffs are provided to the workers.

		engaged in noisy operation. Equipment with inbuilt enclosures, like DG sets, have been purchased by PP. However details of data pertaining to the control of noise levels below 85 dBAhas not been made available by the PP
vii.	Industrial waste water (workshop and waste water from mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.	**Being complied with** It is observed that oil and grease trap have been provided for the waste water generated from the workshop and the treated water is used in gardening. It is also observed that no waste water is being generated from mining operation.
viii.	Personnel working in dusty areas shall be provided with protective respiratory devices and they shall also be imparted adequate training and information on safety and health aspects.	**Partially complied with** The PP has informed that protective respiratory devices have been provided to the personnel working in dusty areas and training and information on safety and health aspects is imparted on monthly basis. However, no details pertaining to the protective respiratory devices provided to the personnel working in dusty areas has been provided by the PP.
ix.	A separate Environmental Management Cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the Organization.	**Complied with** It is observed that Environmental Management Cell has been constituted and is headed by Senior Executive, who is reporting to the CEO. A team of trained professionals in respective fields of environment, safety and occupational health has been incorporated in the Environment Cell. The Cell is also assisted by environmental laboratory having trained manpower for carrying out monitoring and analysis of various samples collected in and around project sites. Organizational setup of the Environment Management Cell is given at **Annexure-XI.**
x.	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Office Bhopal, 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	**Partially complied with** It is observed that six monthly compliance report is submitted regularly to the Regional office of MoEF &CC. Reports are also being uploaded to the Company's website. Web link of the PP's company i.e. http://balcoindia.com/sustainability/pdf/MainsatMines.pdf at as accessed on 24.02.2017 at 12.32 PM revealed that regular uploading of the compliance reports on the website of the company is not being done by the PP. The

	shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment and Forests, Bhopal, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board	latest compliance report on 27.10.2015 was uploaded on the website of the company.
xi.	The project authorities shall inform to the Regional Office of the Ministry located at Bhopal regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	**Being complied with**
xii.	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year wise expenditure shall be reported to the Ministry and its Regional Office located at Bhopal.	**Being complied with** It is informed that for year 2015-16 total expenditure on environment protection measures was Rs 11.20 Lakhs (Plantation, check dams, environment monitoring etc). Details of expenditures incurred by the PP on environmental protection measures is given at **Annexure-XII**
xiii.	The project authorities shall inform to the Regional Office located at Bhopal regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	**Complied with**
xiv.	The Regional Office of the Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The project authorities shall extend full cooperation to the officer(s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	The PP has agreed to this condition.
xv.	A copy of this extension of validity of environmental clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.	**Complied with.** A copy of the letter dated 30.10.2015 of the PP conveying the extension of validity of environmental clearance to concerned Panchayat / local NGO is enclosed at **Annexure-XIII.**
xvi.	State Pollution Control Board shall display a copy of this extension of validity of environmental clearance letter at the Regional office, District Industry Centre and Collector's office / Tehsildar s Office for 30 days.	The PP has informed that condition has been complied. However, the same could not be verified as no representative from the CECB was present during the inspection.
xvii	The project authorities shall advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of this extension of validity of	**Complied with.** Copy of the advertisement published in the local newspapers is enclosed at **Annexure - XIV.**

	environmental clearance letter informing that the validity of environmental clearance has been extended up to 8th July,2012 and a copy of this extension 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 shall be forwarded to the Regional Office of the Ministry located in Bhopal.	
xix	The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.	The PP has consented to this condition
xx	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	The PP has consented to this condition
xxi	Any appeal against this extension of validity of environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act,1997.	The PP has consented to this condition
xxii	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act,1991 along with their amendments and rules.	The PP has consented to this condition

From the examination of the above, following is observed.

Specific conditions complied with partially by the PP

i. Condition no. (i) No black topping was observed in the main haul road in the mining lease.

ii. Condition no. (iv) It is also observed that mined out areas are being backfilled concurrently. Since bauxite ore is available at a depth of only 8-10 meters below ground level, no dumps are kept active for long period. No practice of reclaiming the dumps by geo-textile sheet was observed. Retaining walls was observed to be constructed at the foot of new dumps, however, no retaining walls were observed to be provided for old dumps to arrest flow of silt.

iii. Condition no. (v) It is observed that considerable number of of check dams have been constructed and catch pits /sedimentation pits have been provided at the end of the garland drains to arrest the silt. The catch pits/sedimentation pits are de-silted on regular basis. However, garland drains were not constructed for all dumps as some of the dumps were observed without garland drain. Management of existing garland drains was also observed poor

as the measures like de-silting of the catch drains was not observed to be undertaken by the PP.

iv. Condition no. (vii) No full time doctor for occupational health was observed to be deputed by the PP, though the PP has made provisions for doctor on temporary basis. It is informed that occupational health hazards issues have been identified and appropriate safety measures to mitigate these hazards are being practiced. However, no details pertaining to the mitigative hazards measures was made available by the PP.

v. Condition no. (xiii) It is observed that regular monitoring of ground water and surface water is carried out and reports are submitted to all concerned. However, no details pertaining to the monitoring of surface water was made available by the PP.

General conditions complied with partially by the PP

i. Conditions no. (vi) - Details of data pertaining to the control of noise levels below 85 dB(A)has not been made available by the PP.

ii. Condition no. 8 - No details pertaining to the protective respiratory devices provided to the personnel working in dusty areas has been provided by the PP.

Conditions not complied with by the PP

i. General condition no. (v) - No water spraying arrangements on haul roads, loading and unloading and at transfer points were observed to be provided by the PP.

Suresh Kumar Adapa
Scientist 'D'

FORMAT 'C'

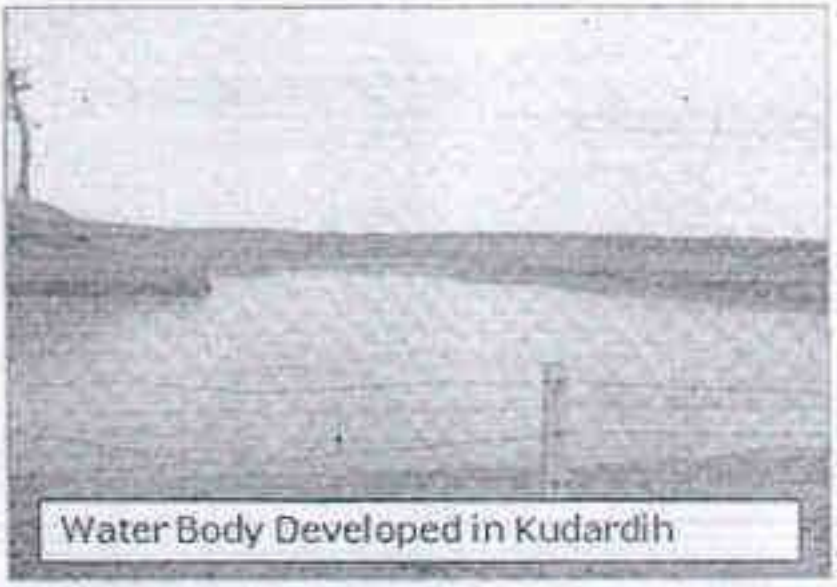
PERFORMA FOR SUBMISSION OF DETAILS OF RECLAMATION WORK UNDERTAKEN BY THE BHARAT ALUMINIUM COMPANY LIMITED

MAINPAT BAUXITE MINE (639.169 Ha)

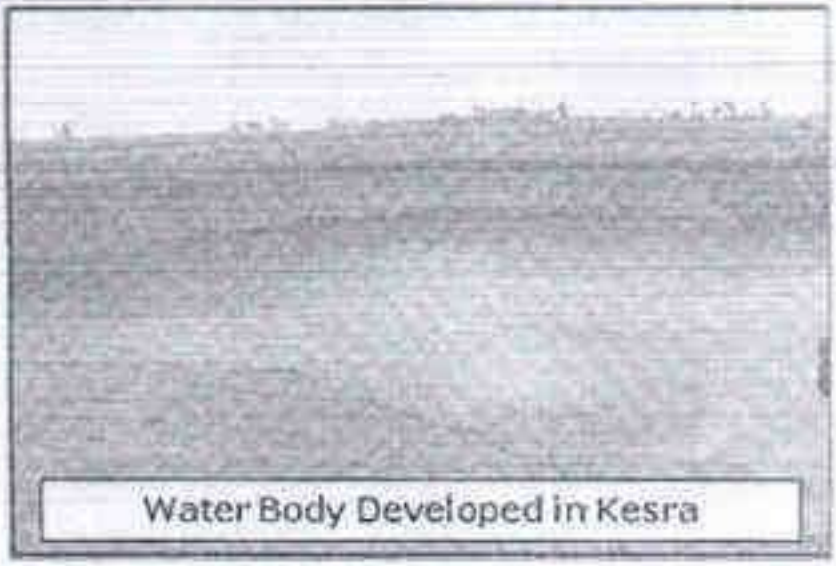
S. No.	Particulars	Area (ha)
1.	Name of the company	Bharat Aluminium Company Limited
2.	Name of Mine	Mainpat Bauxite Mines
1.	Total area of mining lease/mine area required under CBA Act, 1957. Enclose DGPS map in shape file	639.169 ha
2.	Total forest area involved in the mining lease/mine area required under CBA Act, 1957.	376.924 Ha
3.	Year of commencement of mining operation	1993
4.	Details of renewal of mining lease	
	i. Date of grant of original mining lease	Granted on 27.03.1992 and mining lease executed on 09.07.1992.
	ii. 1st renewal	Mining lease was extended for 50 year period as per the MMDR Amendment Act 2015 from the period 09.07.1992 to 08.07.2042 on 30th July 2015.
	iii. 2nd renewal	-
	iv. 3rd or more	-
5.	Detail of forest clearances obtained under the FC Act, 1980	-
	i. Date of grant of forest clearance	24.05.2000
	ii. Area	376.924 Ha
	iii. Renewal of diversion of forest clearance or additional area, if any obtained from the MoEFCC	28.09.2016
6.	Total area of the ML approved under the FC Act	639.169 Ha
7.	Total broken up area so far (ha)	375.060 Ha
	i. Forest land	199.655 Ha
	ii. Non-forest land	176.405 Ha
8.	Area mined out completely	352.760 Ha
	i. Forest land	190.655 Ha
	ii. Non-forest land	162.105 Ha
9.	Forest area required to be reclaimed as per the PMCP as on 31-3-2016	232.167 Ha
	i. Biologically	230.395 Ha
	ii. Technically	1.972 Ha
10.	Forest area actually reclaimed as on 31-3-2016	190.655 Ha
	i. Biologically	187.665 Ha
	ii. Technically	2.46 Ha
11.	Deviation, if any, from the provisions of reclamation given in PMCP	42.73 Ha
	i. Biologically9(i)-10(i)	-42.73 Ha

	ii. Technically 9(ii)-10(ii)	-0.488 Ha
12.	Reasons/justification for deviation	Due to delay of Mining Lease extension & renewal of Forest Clearance
13.	Proposed reclamation plan for next 20 years	
	i. Area to be broken afresh	227.32 Ha
	ii. area to be reclaimed	238.36 Ha

ANNEXURE 1



Water Body Developed in Kudardih



Water Body Developed in Kesra

R. & C. LABORATORY (BALCO, KORBA)
Environment Monitoring Section

REF : BALCO/QAP1/POLL/MS 05/File-08B/MPT-WATER-1/JUNE-16 DATE -15/06/2016

Water Analysis Report of Mainpat Mines.
Sampling Date -04/06/2016

S.No.	Parameters	Units	W1	W2	W4	W5	W6	W7	W8	W9	W10
			Gungutta nallah Kesra	Gungutta nallah Rakit jhana	Mangarda nallah	Down stream 1km of W4	Gungutta nallah proposed T/S	Gungutta nallah 1 km down from W6	Manjhana nallah	Jokhi nallah	Hand pump Kudandih
1	pH		7.0	7.1	7.2	7.2	7.3	7.2	7.1	7.3	6.8
2	Turbidity	NTU	68	72	82	80	74	73	58	82	4.6
3	Conductivity	µS/cm	44.3	45.2	43.6	43.4	46.8	46.5	79.8	37.7	102.9
4	Solid (Total)	mg/l	76	78	86	82	84	82	64	54	27
5	Solid (Dissolved)	mg/l	46	47	52	51	52	50	36	55	21
6	Solid (Suspended)	mg/l	30	31	34	31	32	32	28	39	6
7	Chloride as Cl	mg/l	9.9	10.2	10.7	10.2	11.4	11.7	8.9	12.1	9.2
8	Fluoride as F	mg/l	0.49	0.54	0.52	0.53	0.55	0.52	0.45	0.60	0.53
9	Total Hardness as $CaCO_3$	mg/l	56	58	52	54	59	58	48	61	45
10	Calcium Hardness as $CaCO_3$	mg/l	37	38	36	37	39	39	32	42	30
11	Magnesium Hardness as $CaCO_3$	mg/l	19	20	16	17	20	19	16	15	15
12	Oil & Grease	mg/l	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
13	B.O.D.	mg/l	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
14	C.O.D.	mg/l	3	4	4	3	5	4	4	5	4
15	Sodium as Na	mg/l	0.78	0.81	0.79	0.80	0.72	0.75	0.69	0.83	0.73
16	Potassium as K	mg/l	0.32	0.34	0.31	0.33	0.29	0.32	0.33	0.38	0.31
17	Iron as Fe	mg/l	0.47	0.49	0.50	0.48	0.45	0.47	0.43	0.50	0.44
18	Silica as Si	mg/l	1.18	1.20	1.16	1.17	1.07	1.11	1.05	1.22	1.08
19	Cyanide as CN	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Zinc as Zn	mg/l	0.004	0.003	0.005	0.004	0.004	0.005	0.003	0.006	0.004
21	Manganese as Mn	mg/l	0.004	0.005	0.006	0.005	0.005	0.004	0.004	0.005	0.005
22	Nickel as Ni	mg/l	0.005	0.004	0.004	0.004	0.004	0.005	0.004	0.004	0.005
23	Chromium as Cr	mg/l	0.003	BDL	BDL	BDL	BDL	BDL	0.003	BDL	BDL
24	Lead as Pb	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Copy to:
GM (HSE)

Analysed by

Approved by
Manager (QA)

R & C LABORATORY (BALCO, KORBA)
Environment Monitoring Section

REF : [illegible] WATER [illegible]

DATE -10/07/2016

Water Analysis Report of Mainpat Mines.
Sampling Date - 01/07/2016

S.No.	Parameters	Units	W1	W2	W4	W5	W6	W7	W8	W9	W10
			Gungutta nallah Kesra	Gungutta nallah Pakn mana	Mangonda nallah	Drain [illegible] of W4	Gungutta nallah [illegible]	Gungutta nallah 1 km down from W6	Manjhania nallah	Jokki nallah	Hand pump Kudaran
1	pH		7.2	7.1	7.2	7.4	7.3	7.4	7.1	7.3	6.8
2	Turbidity	NTU	68	72	79	83	77	79	37	87	4.5
3	Conductivity	µS/cm	44.1	44.8	42.7	42.7	47.5	85.9	81.4	29.3	101.3
4	Solid (Total)	mg/l	77	82	95	[illegible]	87	89	68	100	28
5	Solid (Dissolved)	mg/l	47	49	59	53	54	55	40	60	22
6	Solid (Suspended)	mg/l	30	33	36	31	33	34	28	40	6
7	Chloride as Cl	mg/l	9.7	10.4	10.2	10.5	11.2	11.5	9.3	11.8	9.1
8	Fluoride as F	mg/l	0.49	0.52	0.50	0.49	0.54	0.51	0.48	0.43	0.48
9	Total Hardness as $CaCO_3$	mg/l	56	58	55	59	57	54	49	61	40
10	Calcium Hardness as $CaCO_3$	mg/l	37	38	39	34	37	36	32	39	31
11	Magnesium Hardness as $CaCO_3$	mg/l	19	20	13	17	20	18	16	22	19
12	Oil & Grease	mg/l	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
13	B.O.D	mg/l	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
14	C.O.D	mg/l	3	5	5	[illegible]	3	6	3	5	4
15	Sodium as Na	mg/l	0.77	0.80	0.83	[illegible]	0.76	3.78	3.08	0.24	0.77
16	Potassium as K	mg/l	0.31	0.31	0.35	[illegible]	0.31	0.36	0.30	0.36	0.39
17	Iron as Fe	mg/l	0.40	0.48	0.43	[illegible]	0.41	0.47	0.45	0.40	0.47
18	Silica as Si	mg/l	1.24	1.23	1.21	1.19	1.13	1.11	1.08	1.29	1.08
19	Zinc as Zn	mg/l	0.005	0.005	0.005	0.006	0.009	0.008	0.005	0.004	0.004
20	Manganese as Mn	mg/l	0.005	0.005	0.006	0.005	0.005	0.005	0.008	0.006	0.005
21	Nickel as Ni	mg/l	0.003	0.004	0.004	0.006	0.006	0.006	0.004	0.004	0.004
22	Chromium as Cr	mg/l	0.003	BDL	BDL	BDL	BDL	BDL	0.003	BDL	BDL
23	Lead as Pb	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Copy to
GM (HSE)

Analysed by

Asst. Manager (QA)

R. & C. LABORATORY (BALCO, KORBA)
Environment Monitoring Section

REF: BALCO/QA/P1/R(OLL)/MS 05/F4e-08C/APT/WATER-1/SEPT-16 DATE: 18/09/2016

Water Analysis Report of Mainpat Mines (CMDC-Mainpat)
Sampling Date: 06/09/2016

S.No	Parameters	Units	W1	W2	W3	W4	W5	W6	W7	W8
			Mangarda nallah	Hand pump Barima	Nallah-Narmada	Hand Pump-1133	Nallah-Bandand	Hand Pump-Bandand	Pond Keara	Hand pump Keara
1	pH		7.4	6.8	7.3	7.2	7.4	7.1	7.4	6.9
2	Turbidity	NTU	78	4.5	71	4.7	65	4.6	67	4.5
3	Conductivity	µS/cm	44.5	108.6	48.1	84.7	40.7	76.2	48.4	80.5
4	Solid (Total)	mg/l	90	32	86	36	81	34	101	32
5	Solid (Dissolved)	mg/l	55	22	54	25	52	23	63	21
6	Solid (Suspended)	mg/l	35	10	32	11	29	11	38	11
7	Chloride as Cl	mg/l	11.4	10.3	11.6	9.9	11.4	9.6	12.1	9.9
8	Fluoride as F	mg/l	0.45	0.40	0.44	0.55	0.45	0.37	0.48	0.37
9	Total Hardness as $CaCO_3$	mg/l	62	56	66	55	63	54	68	51
10	Calcium Hardness as $CaCO_3$	mg/l	40	35	42	34	40	33	43	31
11	Magnesium Hardness as $CaCO_3$	mg/l	22	21	24	21	23	21	25	20
12	Oil & Grease	mg/l	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
13	B.O.D	mg/l	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
14	C.O.D	mg/l	5	4	3	8	5	5	6	4
15	Sodium as Na	mg/l	0.81	0.69	0.84	0.56	0.86	0.71	0.90	0.68
16	Potassium as K	mg/l	0.37	0.30	0.36	0.29	0.38	0.33	0.39	0.27
17	Iron as Fe	mg/l	0.45	0.45	0.51	0.47	0.53	0.47	0.53	0.44
18	Silica as Si	mg/l	1.19	0.88	1.06	0.87	1.04	0.85	0.89	0.81
19	Zinc as Zn	mg/l	0.005	0.004	0.005	0.004	0.005	0.004	0.006	0.004
20	Manganese as Mn	mg/l	0.004	0.004	0.005	0.004	0.005	0.004	0.005	0.004
21	Nickel as Ni	mg/l	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005
22	Chromium as Cr	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Lead as Pb	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Copy to

Analysed by

Approved by
Manager (QA)

R. & C. LABORATORY (BALCO, KORBA)
Environment Monitoring Section

REF : BALCO/QAP1/POLL/MS 05/File-06B/MPT-WATER-1/AUGUST-16 DATE :-16/08/2016

Water Analysis Report of Mainpat Mines.
Sampling Date - 01/08/2016

S.No.	Parameters	Units	W1	W2	W4	W5	W6	W7	W8	W9	W10
			Gungutta nallah Kesra	Gungutta nallah Pakri jharia	Mangarda nallah	Down stream 1km of W4	Gungutta nallah proposed TIS	Gungutta nallah 1 km down from W6	Manjharia nallah	Jokki nallah	Hand pump Kudanah
1	pH		7.2	7.3	7.4	7.3	7.3	7.4	7.3	7.3	6.8
2	Turbidity	NTU	74	76	80	80	81	82	81	91	4.7
3	Conductivity	µS/cm	44.5	44.7	42.9	43.6	47.5	46.8	81.8	39.6	104.7
4	Solid (Total)	mg/l	83	86	94	96	91	94	72	105	32
5	Solid (Dissolved)	mg/l	50	51	57	58	56	58	42	62	24
6	Solid (Suspended)	mg/l	33	35	37	38	35	36	30	43	8
7	Chloride as Cl	mg/l	9.9	10.4	10.5	10.8	11.2	11.6	9.5	11.8	9.3
8	Fluoride as F	mg/l	0.48	0.46	0.44	0.48	0.47	0.49	0.47	0.52	0.51
9	Total Hardness as $CaCO_3$	mg/l	61	62	60	63	61	57	52	65	61
10	Calcium Hardness as $CaCO_3$	mg/l	39	40	38	40	39	38	34	41	33
11	Magnesium Hardness as $CaCO_3$	mg/l	22	22	22	23	22	19	18	24	10
12	Oil & Grease	mg/l	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces	Traces
13	B.O.D	mg/l	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
14	C.O.D	mg/l	7	7	4	5	7	6	5	5	4
15	Sodium as Na	mg/l	0.79	0.84	0.66	0.84	0.77	0.78	0.71	0.84	0.73
16	Potassium as K	mg/l	0.36	0.38	0.37	0.39	0.35	0.35	0.33	0.37	0.39
17	Iron as Fe	mg/l	0.51	0.50	0.50	0.55	0.47	0.49	0.47	0.51	0.47
18	Silica as Si	mg/l	1.29	1.23	1.24	1.23	1.16	1.14	1.12	1.28	1.10
19	Zinc as Zn	mg/l	0.006	0.007	0.005	0.006	0.004	0.006	0.005	0.004	0.002
20	Manganese as Mn	mg/l	0.006	0.006	0.004	0.007	0.005	0.005	0.004	0.003	0.003
21	Nickel as Ni	mg/l	0.005	0.004	0.004	0.006	0.004	0.005	0.004	0.004	0.003
22	Chromium as Cr	mg/l	0.003	BDL	BDL	BDL	BDL	BDL	0.003	BDL	BDL
23	Lead as Pb	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Copy to
GM (HSE)

Analysed by

Approved by
Manager (QA)

ANNEXURE 3

YEAR	No of Saplings Planted
1993-1994	0
1994-1995	9151
1995-1996	10500
1996-1997	19263
1997-1998	31550
1998-1999	30000
1999-2000	0
2000-2001	21650
2001-2002	0
2002-2003	45000
2003 -2004	34500
2004-2005	21094
2005-2006	30000
2006-2007	108500
2007-2008	100000
2008-2009	119000
2009-2010	85000
2010-2011	110000
2011-2012	100000
2012-2013	130000
2013-2014	60000
2014-2015	60000
2015-2018	15000

Annexure

Central Ground Water Authority

Ministry of Water Resources

Government of India

No. 21-4(119)/NCCR/CGWA/2011- 1827 Dated- 14 DEC 2011

To,

M/s Bharat Aluminium Corporation Ltd.
Mines Department, Engineering Building,
Plant – 1, BALCO
Korba 495684, Chhattisgarh.

Sub: Request for Ground Water clearance in respect of M/s Bharat Aluminium Corporation Ltd., for the proposed expansion of Bauxite mining at village Mainpat, Block & Tehsil Mainpat, District Surguja, Chhattisgarh -reg.

Sir,

The area where the project falls comes under safe category as per the ground water assessment carried out by Central Ground Water Board. Since the total requirement of ground water is 17 m^3/day, NOC is not required for ground water withdrawal from Central Ground Water Authority. However, to neutralize the adverse impact of ground water withdrawal that may arise on a long term basis, the industry/ project is advised to undertake the following measures:

1. Ground Water withdrawal shall not exceed the proposed quantity of 17 m^3/day.
2. All abstraction structures should be fitted with water meter by the industry and monitoring of ground water abstraction to be undertaken accordingly on regular basis, at least once in a month. The data may be submitted on a yearly basis to the Regional Director, Central Ground Water Board, North Central Chhattisgarh Region, Raipur for perusal and records.
3. The industry should adopt and implement artificial recharge measures/rain water harvesting measures for augmenting the ground water resources of the area as per the hydrogeological investigation.
4. The industry shall ensure proper conservation measures, recycling and reuse of waste water after adequate treatment.
5. The industry shall monitor the ambient ground water regime of the area through piezometers and submit the data on a yearly basis to the Regional Director, Central Ground Water Board, North Central Chhattisgarh Region, Raipur for perusal and records.

Yours faithfully,

Regional Director

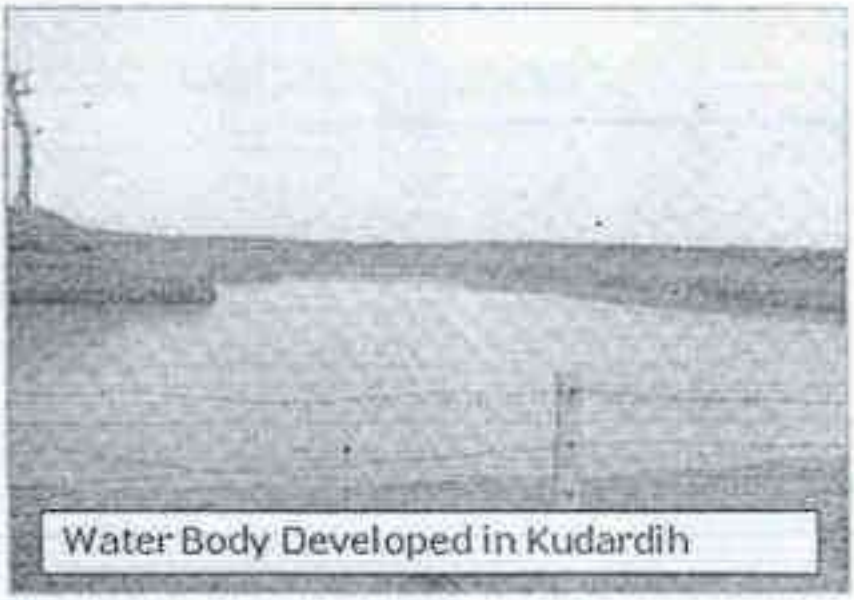
Copy for information to the:

1. Member Secretary, Chhattisgarh Environment Conservation Board, 1-Tilak Nagar, Shiv Mandir Chowk, Main Road, Awanti Vihar, Raipur-492006, Chhatisgarh, with a request to ensure that Rain Water Harvesting and Artificial Recharge methods are being implemented by the firm and quantity of withdrawal is not exceeding 17 m^3/day.
2. Regional Director, Central Ground Water Board, North Central Chhattisgarh Region, Reena Apartments, 2nd Floor, Panchpedi Naka, Raipur 492001, Chhattisgarh. This has reference to your letter No. 35-1/NCCR/Vol-VII-1456 dated 25.11.2011.
3. TS to Chairman, Central Ground Water Board, NH-IV, Faridabad

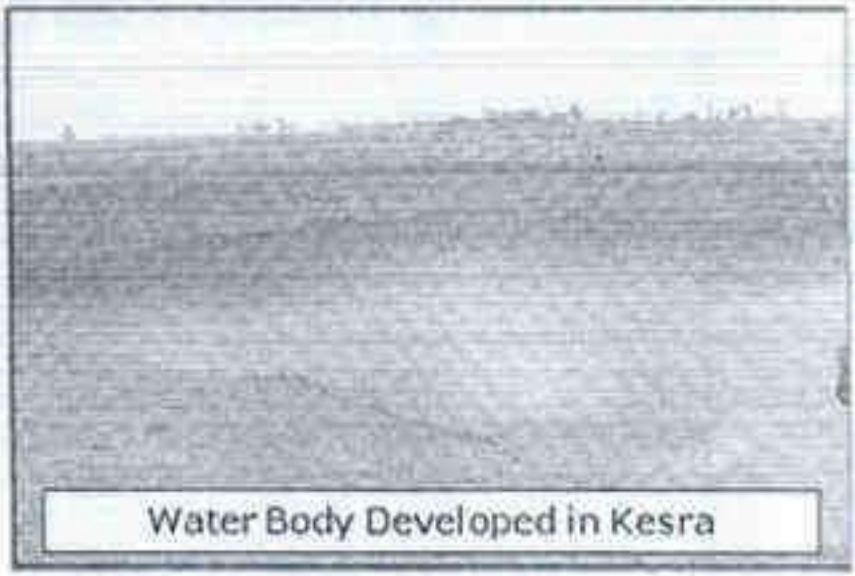
Regional Director

West Block-2, Wing-3, Ground Floor, R. K. Puram, Sector-1, New Delhi- 110066
Tel: (011) 26175362, 26175373, 26175367 Fax (011) 26175369 e-mail: [illegible] website: [illegible]

ANNEXURE 1



Water Body Developed in Kudardih



Water Body Developed in Kesra

CHHATTISGARH ENVIRONMENT CONSERVATION BOARD

Paryavas Bhawan, Sector - 19,
Nava Raipur (C.G.) 492 002

No. 3224/TS/CECB/2015 Naya Raipur, dated, 22.07.2016

To,

M/s Bharat Aluminium Company Limited,
(Mainpat Bauxite Mine)
Village- Kesara, Kuderidih & Sapnadar,
Tehsil-Sitapur
District- Surguja (C.G.)

Sub: - Renewal of consent of the Board under section 25/26 of the Water (Prevention and Control of Pollution) Act, 1974.

Ref: - 1. Last renewal of consent of the Board issued under section 25/26 of the Water (Prevention and Control of Pollution) Act, 1974 vide letter no. 4142/TS/CECB/2015 Raipur, dated: 27/11/2015

2. Your online application no. 200278, Dated: 01/03/2016 and subsequent correspondence ending dated: 11/04/2016

-: 00 :-

With reference to your above application, consent is hereby renewed for a period of one year from 28/08/2016 to 27/08/2017, subject to the fulfilment of the terms and conditions incorporated in the consent letter no. 5671/TS/CECB/2011 Raipur, dated: 05/01/2011, subsequent renewal of consent issue by Board and additional conditions mentioned below.

This renewal of consent is valid for production capacity of -

Name	Production Capacity
Mining of Bauxite Ore	7.5 Lakhs Tonne Per Annum [Seven Point Five Lakhs Tonne Per Annum]

Note:-

This consent renewal is being granted to the industry without prejudice to the proceeding pending against the industry in the Court of Law. This consent in no way to be taken as measure of proof that industry has not violated any related pollution laws at any time in past. Hence, whatever decision taken by Hon'ble Court shall be binding on the industry.

Additional Conditions

1. Industry shall start mining operation only after obtaining permission for land entry by the competent authority. Industry shall submit copy of lease deed and permission for land entry at the earliest.
2. Industry shall operate and maintain the effluent treatment system effectively and regularly. Industry shall ensure treated effluent quality within the standards prescribed by Board published in Gazette Notification

dated 25/03/1988. Treated effluent shall be used for dust suppression, domestic use, irrigation, other useful purposes etc. Industry shall not discharge any treated / untreated effluent in to the river or any surface water bodies. No effluent shall be discharged outside of the mine premises in any circumstances, hence zero discharge condition shall be maintained at the time, failing which, this renewal of consent may be cancelled.

3. Industry shall ensure safe and scientific arrangement for disposal of all solid wastes.

4. All internal roads shall be maintained properly. Dust, muck and sludge generated due to transportation on the roads shall be cleaned and disposed off properly. Industry shall maintain good housekeeping within mine lease area. Industry shall ensure the transportation of ore in fully covered vehicles.

5. Industry shall use fly ash brick, fly ash blocks or fly ash based products in their construction/repairing activities.

6. Industry shall submit monitoring report of effluent regularly.

7. Industry shall adopt rainwater harvesting technique in the project area and residential area (if any) for recharge of ground water within 15 days.

8. Wide green belt of broad leaf local species shall be developed along the mine lease area. As far as possible maximum area of open spaces shall be utilized for plantation purposes. Extensive tree plantation shall be carried out in this monsoon including plantation in over burden area.

9. Industry shall submit Environment Statement to this Board as per provision of Environment (Protection) amendment Rule, 1993 for the previous year ending 31st March on or before 30th September every year.

Please acknowledge the receipt of this letter.

For & on behalf of
Chhattisgarh Environment Conservation Board Raipur (C.G.)

Member Secretary
Chhattisgarh Environment Conservation Board
Naya Raipur (C.G.)

Endt. No. /TS/CECB/2016 Naya Raipur, dated / /2016

Copy to :-

1- Regional Officer, Regional Office, Chhattisgarh Environment Conservation Board, Ambikapur (C.G.). Please ensure compliance and report, if any condition/conditions are violated by the industry.

2- Cess Section, Chhattisgarh Environment Conservation Board, Raipur (C.G.).

Member Secretary
Chhattisgarh Environment Conservation Board
Naya Raipur (C.G.)

CHHATTISGARH ENVIRONMENT CONSERVATION BOARD

Paryavas Bhawan, Sector - 19,
Naya Raipur (C.G.) 492 002

No. 3242/TS/CECB/2016 Naya Raipur, dated 23/9/2016

To

M/s Bharat Aluminium Company Limited
(Mainpat Bauxite Mine)
Village- Kesera, Kudaridih & Sapnadar,
Tehsil-Sitapur,
District- Surguja (C.G.)

Sub :- Renewal of consent of the Board under section 21 of the Air (Prevention and Control of Pollution) Act, 1981.

Ref :- 1. Last renewal of consent of the Board issued under section 21 of the Air (Prevention and Control of Pollution) Act, 1981 vide letter no. 4144/TS/CECB/2015 Raipur, dated: 27/11/2015.

2. Your online application no. 200278, Dated: 01/03/2016 and subsequent correspondence ending dated: 11/04/2016.

-- oo --

With reference to your above application, consent is hereby renewed for a period of one year from 28/08/2016 to 27/08/2017, subject to the fulfillment of the terms and conditions incorporated in the consent letter no. 5873/TS/CECB/2011 Raipur, dated: 05/01/2011, subsequent renewal of consent issue by Board and additional conditions mentioned below.

This renewal of consent is valid for production capacity of:-

Name	Production Capacity
Mining of Bauxite Ore	7.5 Lakhs Tonne Per Annum (Seven Point Five Lakhs Tonne Per Annum)

Note:-

This consent renewal is being granted to the industry without prejudice to the proceeding pending against the industry in the Court of Law. This consent in no way to be taken as measure of proof that industry has not violated any related pollution laws at any time in past. Hence, whatever decision taken by Hon'ble Court shall be binding on the industry.

Additional Conditions

1. Industry shall start mining operation only after obtaining permission for land entry by the competent authority. Industry shall submit copy of lease deed and permission for land entry at the earliest.
2. Industry shall operate and maintain the air pollution control system effectively and regularly. Effective steps shall be takin to control fugitive

dust emission. Fixed type automatic water sprinkling system shall be installed at haul road / other roads, ore stock yard etc. Dust suppression system (water sprinkling arrangement) shall be made more effective to ensure ambient air quality within prescribed limit. Industry shall maintain the ambient air quality within prescribed limit in and around the mine area all the time. Chhattisgarh Environment Conservation Board may further stipulate stringent particulate matter emission limit depending upon environmental conditions.

3. Regular monitoring for the measurement of air pollutants level in ambient shall be carried out. Industry shall submit ambient air quality monitoring reports to the Board regularly every month.

4. Industry shall ensure safe and scientific arrangement for disposal of all solid wastes.

5. All internal roads shall be maintained properly. Dust muck and sludge generated due to transportation on the roads shall be cleaned and disposed off properly. Industry shall maintain good housekeeping within mine lease area. Industry shall ensure the transportation of ore in duly covered vehicles.

6. Industry shall use fly ash brick, fly ash blocks or fly ash based products in their construction/repairing activities.

7. Wide green belt of broad leaf local species shall be developed along the mine lease area. As far as possible maximum area of open spaces shall be utilized for plantation purposes. Extensive tree plantation shall be carried out in this monsoon including plantation in over burden area.

8. Industry shall submit Environment Statement to this Board as per provision of Environment (Protection) amendment Rule, 1993 for the previous year ending 31st March on or before 30th September every year.

Please acknowledge the receipt of this letter.

For & on behalf of
Chhattisgarh Environment Conservation Board Raipur (C.G.)

Member Secretary
Chhattisgarh Environment Conservation Board
Naya Raipur (C.G.)

Endt. No. /TS/CECB/2016 Naya Raipur, dated / /2016

Copy to :-

1. Regional Officer, Regional Office, Chhattisgarh Environment Conservation Board, Ambikapur (C.G.). Please ensure compliance and report, if any condition/conditions are violated by the industry.

Member Secretary
Chhattisgarh Environment Conservation Board
Naya Raipur (C.G.)

Annexure-V

R. & C. LABORATORY (BALCO, KORBA)

Environment Monitoring Section

REF : BALCO/QAP1/POLL/IMS 05/File-088/MPT-AIR-1/Apr-16 DATE - 15/04/2016

Ambient Air Quality Report of Mainpat Bauxite mines

Sampling Date : 01 to 04 April 2016

SN	Parameters	Unit	Norms	Near Balco T/S	Old Kesra	Camp No-2	Office
				01/04/2016	02/04/2016	03/04/2016	04/04/2016
1	PM 2.5	µg/m3	40(Annual) & 60(24 hrs)	31	27	34	32
2	PM 10	µg/m3	60(Annual)&100(24 hrs)	52	44	55	53
4	SO2	µg/m3	50(Annual)&80(24 hrs)	10	10	12	13
5	NOx	µg/m3	40(Annual)&80(24 hrs)	9	8	11	14
6	Sound level (Day)	dB	75	44.3	45.0	47.2	47.4
7	Sound level (Night)	dB	70	44.0	44.6	45.4	46.5

Note : Mines activity temporary closed

Norms-National Ambient Air Quality Standards (18 November 2009)

Copy to
GM (HSE)

Analysed by

Approved by
Manager (QA)

R. & C. LABORATORY (BALCO, KORBA)

Environment Monitoring Section

REF : BALCO/QA/P1/POLL/IMS 05/File-08B/MPT-AIR-1/MAY-16 DATE -14/05/2016

Ambient Air Quality Report of Mainpat Bauxite mines

Sampling Date : 01 to 04 May 2016

SN	Parameters	Unit	Norms	Near Balco Trg	Old Kesra	Camp No-2	Office
				01/05/2016	02/05/2016	03/05/2016	04/05/2016
1	PM 2.5	µg/m3	40(Annual) & 60(24 hrs)	31	28	33	32
2	PM 10	µg/m3	60(Annual)& 100(24 hrs)	53	49	55	56
4	SO2	µg/m3	50(Annual)&80(24 hrs)	10	9	12	13
5	NOx	µg/m3	40(Annual)&80(24 hrs)	9	8	11	12
6	Sound level (Day)	dB	75	44.3	44.6	45.9	46.5
7	Sound level (Night)	dB	70	43.7	44.3	45.2	45.8

Note : Mines activity temporaly closed

Norms-National Ambient Air Quality Standards (18 November 2009)

Copy to

GM (HSE)

Analysed by

Approved by

Manager (Qual

R. & C. LABORATORY (BALCO, KORBA)

Environment Monitoring Section

REF : BALCO/QAP1/PDLL/MS 05/File-05B/MPT-AIR-1/JUNE-16 DATE 16/06/2016

Ambient Air Quality Report of Malinpat Bauxite mines

Sampling Date : 01 to 04 June 2016

SN	Parameters	Unit	Norms	Near Balco T/S	Old Kesra	Camp No-2	Office
				01/06/2016	04/06/2016	02/06/2016	03/06/2016
1	PM 2.5	µg/m3	40(Annual) & 60(24 hrs)	27	26	32	30
2	PM 10	µg/m3	60(Annual)&100(24 hrs)	48	47	53	51
4	SO2	µg/m3	50(Annual)&80(24 hrs)	10	9	10	11
5	NOx	µg/m3	40(Annual)&80(24 hrs)	8	7	9	9
6	Sound level (Day)	dB	75	44.2	44.0	45.6	45.8
7	Sound level (Night)	dB	70	43.8	43.7	44.7	45.2

Note : Mines activity temporary closed.

Norms-National Ambient Air Quality Standards (19 November 2009)

Copy to

GM (HSE)

Analysed by

Approved by

Manager (QA)

R. & C. LABORATORY (BALCO, KORBA)

Environment Monitoring Section

REF: [illegible] JULY-16 DATE: 15/07/2016

Ambient Air Quality Report of Mainpat Bauxite Mines

Sampling Date : 01 TO 04 JULY 2016

SN	Parameters	Unit	Norms	Near Balco T/S	Old Koara	Camp No 2	Office
				01/07/2016	02/07/2016	03/07/2016	04/07/2016
1	PM 2.5	µg/m3	40(Annual) & 60(24 hrs)	28	28	31	30
2	PM 10	µg/m3	60(Annual)&100(24 hrs)	49	47	53	50
4	SO2	µg/m3	50(Annual)&80(24 hrs)	11	9	12	11
5	NOx	µg/m3	40(Annual)&80(24 hrs)	9	7	10	9
6	Sound level (Day)	dB	75	44.2	44.0	45.3	45.5
7	Sound level (Night)	dB	70	43.8	43.7	44.7	44.8

Note : Mines activity temporary closed.

Norms-National Ambient Air Quality Standards (18 November 2009)

Copy to:
GM (HSE)

Analysed by

Approved by
Manager (QA)

R. & C. LABORATORY (BALCO, KORBA)

Environment Monitoring Section

REF : BALCO/QAP1/POLL/MS 05/File-08B/MPT-AIR-1/AUGUST-16 DATE -15/08/2016

Ambient Air Quality Report of Mainpat Bauxite mines

Sampling Date : 01 to 04 AUGUST 2016

SN	Parameters	Unit	Norms	Near Balco TIS	Old Kesra	Camp No-2	Office
				01/08/2016	02/08/2016	03/08/2016	04/08/2016
1	PM 2.5	µg/m3	40(Annual) & 60(24 hrs)	24	23	30	26
2	PM 10	µg/m3	60(Annual)& 100(24 hrs)	45	44	53	48
3	SO2	µg/m3	50(Annual)&80(24 hrs)	11	7	10	9
4	NOx	µg/m3	40(Annual)&80(24 hrs)	10	5	8	7
5	Sound level (Day)	dB	75	44.2	43.8	45.1	45.3
6	Sound level (Night)	dB	70	43.6	43.7	44.7	44.6

Note : Mines activity temporary closed

Norms-National Ambient Air Quality Standards (18 November 2009)

Copy to
GM (HSE)

Analysed by

Accepted by
Manager (QA)

R. & C. LABORATORY (BALCO, KORBA)

Environment Monitoring Section

REF : BALCO/QAP1/POLL/MS 05/File-08B/MPT-AIR-1/SEPT-16 DATE -16/09/2016

Ambient Air Quality Report of Malnpat Bauxite mines

Sampling Date : 01 to 04 September 2016

SN	Parameters	Unit	Norms	Near Balco T/S	Old Kesra	Camp No-2	Office
				01/09/2016	02/09/2016	03/09/2016	04/09/2016
1	PM 2.5	µg/m3	40(Annual) & 60(24 hrs)	25	23	27	26
2	PM 10	µg/m3	60(Annual)& 100(24 hrs)	48	45	50	46
3	SO2	µg/m3	50(Annual)&80(24 hrs)	11	10	11	10
4	NOx	µg/m3	40(Annual)&80(24 hrs)	10	8	9	8
5	Sound level (Day)	dB	75	44.0	43.8	45.2	45.0
6	Sound level (Night)	dB	70	43.6	43.4	44.9	44.4

Note : Mines activity temporary closed.

Norms-National Ambient Air Quality Standards (18 November 2009) .

Copy to
GM (HSE)

Analysed by

Approved by
Manager (QA)

Environment Management Cell – Mainpat Bauxite Mines, BALCO

Annexure-XII

SN	Particulars	Capital cost		Annual recurring cost	
		Existing	Proposed	Existing	Proposed
1	Pollution Control (Separately provide break-up)	10.00	20.00	12.50	61.14
2	Pollution Monitoring (Separately provide break-up)	4.50	13.00	4.00	4.80
3	Occupational Health	2.00	5.50	1.00	3.00
4	Green Belt/Mine/Township	-	-	3.50	12.25
5	Reclamation / Rehabilitation of mined out area	-	-	20.00	137.50
6	Others (specify) NPV Wildlife Habitat Improvement Plan Compensatory Afforestation Fencing and Safety Zone			105.91	-
Total		16.50	38.50	146.91	218.69

BHARAT ALUMINIUM COMPANY LIMITED

P.O. Balco Nagar, Korba (C.G.) INDIA Pin- 495684
Phone : (07759) 242005, 242001 Fax : (07759) 242169

Mainpat Mines/EC/Apr/2010/ Date: 30.10.2015

To
Manav Sansadhan Sanskriti Vikas Parishad (MSSVP)
Darripara, Ambikapur,
Chhattisgarh-497001

Sub: Submission of extension of validity of Environment Clearance (EC) of Mainpat Bauxite Mines for the production capacity of 0.75 MTPA

Dear Sir,

This is with reference to the subject mentioned matter. M/s Bharat Aluminium Company Limited (BALCO) is operating Bauxite mines in villages of Kesra, Kudaridih and Sapnadar, Mainpat Tehsil, Surguja district, Chhattisgarh state with the production capacity of 0.75 MTPA. The Mining lease over an area of 639.169 Ha was initially granted to BALCO vide order no. 3/74/89/12307 dated 27.03.1992 by Govt. of Madhya Pradesh for a period of 20 years from 09.07.1992 to 08.07.2012. Prior to the expiry of validity of Mining Lease, BALCO has applied for its renewal to the State Government.

The mining lease period was extended upto 08.07.2042 under provision of 8 (A) 5 of the MMDR Amendment Act, 2015. Subsequent to this, the MoEF&CC extended the validity of Environmental Clearance (EC) for period up to 16.09.2038, vide its letter No F. No. J-11015/235/2007.IA-II (M) dated 27.10.2015.

So, we are hereby submitting the copy of the Environment Clearance letter J-11015/235/2007.IA-II (M) dated 27.10.2015 to your good office.

Thanking You,

For Bharat Aluminium Company Limited

30/10/15

Yours faithfully,

Received

ANNEXURE XIV

भारत एल्युमिनियम कम्पनी लिमिटेड
कोरबा, छत्तीसगढ़

Bharat Aluminium Co. Ltd.
Korba, Chhattisgarh

PUBLIC NOTICE

Ref No.

Date: 7th March, 2017

TOWHOMSOEVER IT MAY CONCERN

This is to certify that there is court cases pending against Manipur Bauxite Mines till date.

Matter is pending for service of summon / notice.

Signature Rajesh Mishra

Designation Head - Bauxite mines

Ref No.

Date: 7th March, 2017

TOWHOMSOEVER IT MAY CONCERN

This is to certify that there is court cases pending against Bocai Daldan Bauxite Mines till date.

Matter is pending for service of summon / notice.

Signature Rajesh Mishra

Designation Head Bauxite mines