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balco | BHARAT ALUMINIUM COMPANY LIMITED
P.O. - BALCO Nagar, Korba, CG
India - 495684

BALCO/Env/A-02(A)/2024/419

Date: 20.11.2024

To,
The Regional Officer (IRO),
Ministry of Environment and Forest, Climate Change,
Integrated Regional Office, Aranya Bhawan,
North Block, Sector-19,
Nava Raipur, Atal Nagar (CG) 492002.

Subject: Half Yearly Compliance Status Report (April 2024 to September 2024) of Mainpat Bauxite Mines, BALCO.

Dear Sir,

With reference to the general condition number thirteen (no. xiii), mentioned under the Environmental Clearance (EC) No. J-11015/235/2007-IA II (M), dated 26th October, 2010 & EC extension received vide letter dated 27/10/2015, granted to M/s Bharat Aluminium Company Limited (BALCO), please find enclosed herewith the Half Yearly compliance report of our Mainpat Bauxite Mines.

We hope that the above is in line with the requirements under the abovementioned Environmental Clearance. In case your good office requires any further information or clarification, we would be glad to provide the same.

Thanking You,

Yours Truly,

for Mishra 20/11/2024

Anil Mishra
Mines Manager
Mainpat Bauxite Mines

Enlc:- a/a

Copy to: The Regional Officer, Chhattisgarh Environment Conservation Board, Ambikapur (C.G).

Compliance Status for Environmental Clearance No. J-11015/235/2007-IA.II (M)
Dated: 26th October 2010 and extension received for Environmental Clearance vide letter dated 27/10/2015
Mainpat Bauxite Mines, Surguja Distt., Chhattisgarh.
(April 2024 to September 2024)

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.	The village road through which ore transportation takes place is being maintained by BALCO. The main road has been black topped.
ii	Rainwater 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.	Rainwater harvesting systems have been adopted in Mines area and Township to recharge the ground water. Status of the same was submitted to MoEF. Mined out pits have been developed as Rainwater harvesting structures in the Mining Area. Please refer to **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.	Seven Piezometric wells have been constructed and the water quality is being monitored regularly for the depletion and contamination. Our mining is open cast mining and confined to a maximum of 8-10 m b.g.l, thus it does not intersect with the ground water level. Mines are not in operation since October 2019. Please refer to **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.	The mined-out areas are concurrently backfilled and thus as such no dumps are kept for long period. Only the topsoil is kept for few months, not more than six months for spreading over the backfilled area & reclaimed area. Temporary dump areas are protected with retaining walls to arrest the slits.

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.	66 nos. of check dams have been constructed and catch / sedimentation pits have been provided at the end of garland drains to arrest the silt. The catch /sedimentation pits are de-silted on regular basis.
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.	Mines are not in operation w.e.f. October 2019. No work is being carried out. We have submitted the letter of intimation for the same to CECB. Please refer to **Annexure – II**
vii	Occupational health and safety measures for the workers including identification of work related health hazards, training on 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.	Work related occupational health hazards have been identified and appropriate safety measures to mitigate these hazards are already being practiced as per DGMS and other statutory requirements. BALCO has organized various camps on waterborne diseases, HIV and health effects on exposure to mineral dust from time to time. Periodic monitoring and health check-ups are carried out and records are maintained at site. Onsite and off-site awareness training on work-related aspects and use of personal protective equipments (PPEs) to employees and workers are given on regular basis.
iii	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.	Topsoil is stacked separately and for a period not more than six months, so that the soil could retain its nutrient value.

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.	Being shallow mine working, the concurrent backfilling system has been adopted which results in minimal time exposure of open pit/dump and such backfilled area is afforested in this way land degradation is minimized in our mines therefore use of geo-textile is not required. Old dumps have been properly levelled and plantation has been developed. No new dumps are envisaged as the mines are not in operation w.e.f. October 2019. Please refer to **Annexure – II**
x	Slope of the mining bench and ultimate pit limit shall be as per the mining scheme approved by Indian Bureau of Mines.	It is being complied with scheme approved by IBM, however as we are concurrently backfilling the mined-out area, and bench height is less than 10m, therefore, there is no risk of slope failure. Also, we have conducted a slope stability study through NIT Raipur.
xi	Drilling (if any) shall be conducted by using dust extractors/wet drilling. Controlled blasting shall be undertaken.	Wet drilling methods have been adopted to control the dust and controlled blasting is carried out between 1:00 PM - 2:00 PM. However, mines are not in operation w.e.f. October 2019. Please refer to **Annexure – II**
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.	Green belt development is carried out every year in and around the Mines, with the native trees and fruit bearing species with the involvement of local people. Refer to **Annexure No. III** for the year-wise plantation details (no. of saplings and area of plantation).

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.	Mines are not in operation w.e.f. October 2019. No work is being carried out. We have submitted the letter of intimation for the same to CECB. Please refer to **Annexure – II.**
xiv	The wastewater from the mine shall be treated to conform to the prescribed standards before discharging into the natural stream. The discharged water from the Tailing Dam (if any) shall be regularly monitored and a report submitted to the Ministry of Environment & Forests, Central Pollution Control Board and the State Pollution Control Board.	No wastewater is generated from the mining operation as it is an opencast mining and is confined to a maximum depth of 8-10 m b.g.l. Only the rainwater during rainy season is passed through garland drains, series of check dams and sedimentation pits.
xv	Prior permission from the competent authority shall be obtained for extraction of ground water, if any.	Permission has been obtained. Please refer to **Annexure – IV**
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 enclosures so that no dust particles / fine matters escape during the course of transportation. No overloading of ores for transportation shall be committed.	Pollution under Control Certificate is verified for all the ore transporting vehicles and tarpaulin cover is ensured. Overloading of ores is not allowed. However, mines are not in operation since October 2019. Please refer to **Annexure – II**
xvii	Progressive reclamation of the mined-out area shall be undertaken in conformity 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.	Concurrent backfilling / reclamation is carried out as per the approved Mine plan. A progressive Mine Closure Plan has already been submitted to MoEF. Presently we are having Mine plan & Progressive mine closure plan for next five year, from 2021-22 to 2025-26 and the same was 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.	Mines are not in operation w.e.f. October 2019. No work is being carried out. We have submitted the letter of intimation for the same to CECB. Please refer to **Annexure – II**
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.	Consent to operate under Air & Water Act obtained & renewed vide letter no. 4494/TS/CECB/2024 Naya Raipur 27/08/2024 valid up to 27/08/2025.
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.	Complied.
ii.	No change in the calendar plan including excavation, quantum of bauxite and waste shall be made.	Noted.
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.	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. in consultation with State Pollution Control Board. Mines are not in operation w.e.f. October 2019. No work is being carried out. We have submitted the letter of intimation for the same to CECB. Please refer to **Annexure – II**
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	Being Complied with. We are regularly submitting the Ambient Air Quality monitoring reports. Please refer **Annexure–V** (from April

S.No.	Condition	Compliance
	office located at Lucknow and the State Pollution Control Board / Central Pollution Control Board once in six months.	2024 to September 2024)
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.	The dust generated from haul roads, during loading and unloading at transshipment points etc., is controlled by regular water sprinkling. Fugitive dust emissions are regularly monitored, and data is maintained. Mines are not in operation w.e.f. October 2019. No work is being carried out. We have submitted the letter of intimation for the same near CECB. Please refer to **Annexure – II**
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.	Preventive and scheduled maintenance of equipment has been regularly carried out for keeping the noise within permissible limits. Operator cabins at all the HEMM 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 acoustics enclosures are in place, like DG sets. However, mines are not in operation w.e.f. October 2019. Please refer to **Annexure – II**
vii.	Industrial wastewater (workshop and wastewater 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.	Oil and grease trap has been constructed for the wastewater, if generated during vehicle maintenance /cleaning, however no wastewater is being generated presently as contract vehicles are not being washed at mines premises. No wastewater is generated from mines 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.	Protective respiratory devices have been provided to the personnel working in dusty areas and training on safety and health aspects is imparted on monthly basis. However, mines are not in operation w.e.f. October 2019. Please refer to **Annexure – II**

S.No.	Condition	Compliance
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.	The Environmental Management Cell is in place headed by Senior Executive, directly reporting to the Head of the Organization. The environment management cell is enabled by trained professionals in respective fields of environment, safety and occupational health. The team is also assisted by environmental laboratory having trained manpower for carrying out monitoring and analysis of various samples collected in and around project sites.
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 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	The six-monthly compliance report is submitted regularly to the regional office of MoEF. The last six-monthly report was submitted vide our letter no BALCO/Env/A-02(A)/2024/146 dated 30th May 2024 and the same is being sent to CECB. Also, the reports are being uploaded on the Company's website. Please Refer- **Annexure-VI** (covering letter of six-monthly compliance report).
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 a 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. Mines are not in operation w.e.f. October 2019. No work is being carried out. We have submitted the letter of intimation for the same to CECB. Please refer to **Annexure – II**
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.
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.	We are extending full cooperation to the officer(s) of the Statutory bodies.

S.No.	Condition	Compliance
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.
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.	Noted
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 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.	Complied with. Refer to **Annexure –VII** for copy of the advertisement published in the local newspapers.
5.	The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.	Noted.
6.	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.	Noted.
7.	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.	Noted.
8.	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.	Noted.

S.No.	Condition	Compliance
9.	This issues with the approval of the Competent Authority in the Ministry.	Noted.

Rainwater Harvesting Structure

ANNEXURE I

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balco
BHARAT ALUMINIUM COMPANY LIMITED
P.O. - BALCO Nagar, Korba, CG
India- 495684

NO. Mpt/Min/AGM/2019/OCT/(A)

19th October 2019

To,
The Regional Officer
Chhattisgarh Environment Conservation Board,
Bank Colony Near BTI,
Navapara, Ambikapur
District – Surguja (C.G.)

Sub: Regarding temporary suspension of monitoring activity at Mainpat Bauxite Mines, Balco

Respected Sir,

This has reference to captioned subject.

We would like to inform your good office that our operations at Mainpat Bauxite Mines have been temporarily suspended w.e.f, 10th October, 2019.

In view of that, we wish to bring to your notice that since no operations are being undertaken, the Air, Water and Noise monitoring activity has also been suspended since 10th October, 2019. We ensure you that upon recommencing the mining operations, we shall intimate your good office of the same and continue to monitor the air, water and noise parameters.

This is for your information and record please.

Thanking You

Yours sincerely,
For and on behalf of Bharat Aluminium Company Limited

19/10/19

Ajay Tiwari
Head – Mainpat Bauxite Mines

PLANTATION DETAILS

MAINPAT MINES

Year	No. of saplings planted
1993-1994	0
1994-1995	6151
1995-1996	10500
1996-1997	16263
1997-1998	31556
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
2015-2016	15000
2016-2017	15000
2017-2018	5000
2018-2019	50000
2019-2020	40000
2020-2021	20000
2021-2022	7000
2022-2023	0
2023-2024	0

Central Ground Water Authority
Ministry of Water Resources
Government of India

No. 21-4(119)/NCCR/CGWA/2011- 1807 Dated- 14 DEC 2011

To,
M/s Bharat Aluminium Corporation Ltd.
Mines Department, Engineering Building,
Plant – I, 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: ismsnl-cgwb@nic.in web site: http://cgwb.gov.in

Vimta Labs Limited
Registered Office
142, IDA Phase II, Cherlapally
Hyderabad-500 051,Telangana, India
T : +91 40 2726 4141
F : +91 40 2726 3657

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ISSUED TO:	Report No.:	VLL/VLS/24-25/01975/001
M/s. Bharat Aluminium Company Limited,	Issue Date:	2024-05-04
KORBA (C.G.)	P.O.No:	8500005780
	P.O. Date:	2022-06-29

AMBIENT AIR QUALITY MONITORING AT MAINPAT MINES

Analysis starting date :- 2024-04-08 **Analysis Completion date :- 2024-05-03**

Tests required: Sulphur Dioxide (SO_2), Nitrogen Dioxide (NOx), Particulate Matter (PM10), Particulate Matter (PM2.5), Ammonia (NH_3), Benzene (C_6H_6), Benzo (a) Pyrene in particulate phase, Heavy metals in particulate phase for Arsenic, Nickel & Lead.

Parameters	Units	Limits	Test Results				
Sampling Date			2024-04-19	2024-04-19	2024-04-19	2024-04-19	Method
Sampling Location			Near Balco T/S	Office Area	Kesra Village	Camp No 2	
Sulphur Dioxide (SO_2)	mg/m^3	80	10.5	12.4	17.1	18.2	Improved West and Gaeke Method
Nitrogen Dioxide (NO_x)	mg/m^3	80	8.5	8.8	9.1	10.4	Modified Jacob & Hochheiser Method
Particulate Matter (PM10)	mg/m^3	100	57.1	55.7	61.4	60.8	Gravimetric Method
Particulate Matter (PM2.5)	mg/m^3	60	15.6	15.1	26.3	24.4	Gravimetric Method
Ammonia (NH_3)	mg/m^3	400	0.8	0.9	1.4	1.2	Indophenol Blue Method
Benzene (C_6H_6)	mg/m^3	5	<0.01	<0.01	<0.01	<0.01	Solvent Extraction followed by GC Analysis
Benzo(a) Pyrene in particulate phase	ng/m^3	1	<0.01	<0.01	<0.01	<0.01	Solvent Extraction followed by GC Analysis
Arsenic as As	ng/m^3	6	<1.0	<1.0	<1.0	<1.0	AAS/ICP Method
Nickel as Ni	ng/m^3	20	1.6	1.2	1.9	1.5	AAS/ICP Method
Lead as Pb	mg/m^3	1	0.015	0.018	0.013	0.019	AAS/ICP Method
Carbon Monoxide	mg/m^3	2000	317	336	428	394	NDIR Spectroscopy Method
Ozone	mg/m^3	100	1.2	1.0	1.7	1.4	UV photometric method

ENVIRONMENT LABORATORY Vimta VIMTA LABS REGD. No. DL-33004/99 Sr. No. 5 VIMTA

Dr. Subba Reddy Mallampati
Manager - Environment

Vimta Labs Limited
Registered Office
142, IDA Phase II, Cherlapally
Hyderabad-500 051,Telangana, India
T : +91 40 2726 4141
F : +91 40 2726 3657

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ISSUED TO:	Report No.:	VLL/VLS/24-25/03684/001
M/s. Bharat Aluminium Company Limited,	Issue Date:	2024-06-04
KORBA (C.G.)	P.O.No:	8500005780
	P.O. Date:	2022-06-29

AMBIENT AIR QUALITY MONITORING AT MAINPAT MINES

Analysis starting date :- 2024-05-20 **Analysis Completion date :- 2024-06-03**

Tests required: Sulphur Dioxide (SO_2), Nitrogen Dioxide (NOx), Particulate Matter (PM10), Particulate Matter (PM2.5), Ammonia (NH3), Benzene (C_6H_6), Benzo (a) Pyrene in particulate phase, Heavy metals in particulate phase for Arsenic, Nickel & Lead.

Parameters	Units	Limits	Test Results				
Sampling Date			2024-05-17	2024-05-17	2024-05-17	2024-05-17	Method
Sampling Location			Near Balco T/S	Office Area	Kesra Village	Camp No 2	
Sulphur Dioxide (SO_2)	mg/m^3	80	11.5	11.1	15.3	17.2	Improved West and Gaeke Method
Nitrogen Dioxide (NO_x)	mg/m^3	80	13.2	12.5	16.7	18.6	Modified Jacob & Hochheiser Method
Particulate Matter (PM10)	mg/m^3	100	56.3	58.7	62.1	68.9	Gravimetric Method
Particulate Matter (PM2.5)	mg/m^3	60	12.4	13.8	16.5	18.4	Gravimetric Method
Ammonia (NH_3)	mg/m^3	400	0.6	0.7	0.9	1.1	Indophenol Blue Method
Benzene (C_6H_6)	mg/m^3	5	<0.01	<0.01	<0.01	<0.01	Solvent Extraction followed by GC Analysis
Benzo(a) Pyrene in particulate phase	ng/m^3	1	<0.01	<0.01	<0.01	<0.01	Solvent Extraction followed by GC Analysis
Arsenic as As	ng/m^3	6	<1.0	<1.0	<1.0	<1.0	AAS/ICP Method
Nickel as Ni	ng/m^3	20	1.8	1.3	1.6	1.4	AAS/ICP Method
Lead as Pb	mg/m^3	1	0.016	0.018	0.014	0.011	AAS/ICP Method
Carbon Monoxide	mg/m^3	2000	294	316	352	338	NDIR Spectroscopy Method
Ozone	mg/m^3	100	1.1	1.0	1.4	1.6	UV photometric method

ENVIRONMENT LABORATORY Vimta REGD. No- DL 33004/99 Sr. No.-5 VIMTA

Dr. Subba Reddy Malampati
Manager-Environment

Sensitivity: Internal (C3)

Vimta Labs Limited
Registered Office
142, IDA Phase II, Cherlapally
Hyderabad-500 051,Telangana, India
T : +91 40 2726 4141
F : +91 40 2726 3657

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ISSUED TO:		
M/s. Bharat Aluminium Company Limited, KORBA (C.G.)	Report No.:	VLL/VLS/24-25/06414/001
	Issue Date:	2024-07-05
	P.O.No:	8500005780
	P.O. Date:	2022-06-29

AMBIENT AIR QUALITY MONITORING AT MAINPAT MINES

Analysis starting date :- 2024-06-24 **Analysis Completion date :- 2024-07-04**

Tests required: Sulphur Dioxide (SO_2), Nitrogen Dioxide (NOx), Particulate Matter (PM10), Particulate Matter (PM2.5), Ammonia (NH_3), Benzene (C_6H_6), Benzo (a) Pyrene in particulate phase, Heavy metals in particulate phase for Arsenic, Nickel & Lead.

Parameters	Units	Limits	Test Results				
Sampling Date			2024-06-22	2024-06-22	2024-06-22	2024-06-22	Method
Sampling Location			Near Balco T/S	Office Area	Kesra Village	Camp No 2	
Sulphur Dioxide (SO_2)	mg/m^3	80	8.9	9.3	11.9	13.3	Improved West and Gaeke Method
Nitrogen Dioxide (NO_x)	mg/m^3	80	11.6	12.1	14.4	15.2	Modified Jacob & Hochheiser Method
Particulate Matter (PM10)	mg/m^3	100	46.2	44.8	52.5	56.1	Gravimetric Method
Particulate Matter (PM2.5)	mg/m^3	60	14.6	11.3	17.0	19.1	Gravimetric Method
Ammonia (NH_3)	mg/m^3	400	0.7	0.9	1.3	1.1	Indophenol Blue Method
Benzene (C_6H_6)	mg/m^3	5	<0.01	<0.01	<0.01	<0.01	Solvent Extraction followed by GC Analysis
Benzo(a) Pyrene in particulate phase	ng/m^3	1	<0.01	<0.01	<0.01	<0.01	Solvent Extraction followed by GC Analysis
Arsenic as As	ng/m^3	6	<1.0	<1.0	<1.0	<1.0	AAS/ICP Method
Nickel as Ni	ng/m^3	20	1.1	<1.0	1.3	<1.0	AAS/ICP Method
Lead as Pb	mg/m^3	1	0.013	0.018	0.012	0.015	AAS/ICP Method
Carbon Monoxide	mg/m^3	2000	389	416	351	329	NDIR Spectroscopy Method
Ozone	mg/m^3	100	1.2	1.4	1.6	1.9	UV photometric method

Dr. Subba Reddy Mallampati
Manager - Environment

VIMTA

Vimta Labs Limited
Registered Office
142, IDA Phase II, Cherlapally
Hyderabad-500 051,Telangana, India
T : +91 40 2726 4141
F : +91 40 2726 3657

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ISSUED TO:		
M/s. Bharat Aluminium Company Limited, **KORBA (C.G.)**	Report No.:	VLL/VLS/24-25/08001/001
	Issue Date:	2024-08-05
	P.O.No:	8500005780
	P.O. Date:	2022-06-29

AMBIENT AIR QUALITY MONITORING AT MAINPAT MINES

Analysis starting date :- 2024-07-22 **Analysis Completion date :- 2024-08-02**

Tests required: Sulphur Dioxide (SO_2), Nitrogen Dioxide (NOx), Particulate Matter (PM10), Particulate Matter (PM2.5), Ammonia (NH_3), Benzene (C_6H_6), Benzo (a) Pyrene in particulate phase, Heavy metals in particulate phase for Arsenic, Nickel & Lead.

Parameters	Units	Limits	Test Results				
Sampling Date			2024-07-19	2024-07-19	2024-07-19	2024-07-19	Method
Sampling Location			Near Balco T/S	Office Area	Kesra Village	Camp No 2	
Sulphur Dioxide (SO_2)	mg/m^3	80	10.1	10.8	13.0	14.5	Improved West and Gaeke Method
Nitrogen Dioxide (NO_x)	mg/m^3	80	12.8	13.3	14.8	15.8	Modified Jacob & Hochheiser Method
Particulate Matter (PM10)	mg/m^3	100	46.8	45.1	49.9	52.3	Gravimetric Method
Particulate Matter (PM2.5)	mg/m^3	60	14.8	12.5	19.5	15.3	Gravimetric Method
Ammonia (NH_3)	mg/m^3	400	0.8	1.0	1.4	1.1	Indophenol Blue Method
Benzene (C_6H_6)	mg/m^3	5	<0.01	<0.01	<0.01	<0.01	Solvent Extraction followed by GC Analysis
Benzo(a) Pyrene in particulate phase	ng/m^3	1	<0.01	<0.01	<0.01	<0.01	Solvent Extraction followed by GC Analysis
Arsenic as As	ng/m^3	6	<1.0	<1.0	<1.0	<1.0	AAS/ICP Method
Nickel as Ni	ng/m^3	20	1.1	<1.0	1.3	<1.0	AAS/ICP Method
Lead as Pb	mg/m^3	1	0.0	0.0	0.0	0.0	AAS/ICP Method
Carbon Monoxide	mg/m^3	2000	351.0	349.0	386.0	425.0	NDIR Spectroscopy Method
Ozone	mg/m^3	100	1.0	1.1	1.5	1.3	UV photometric method

Dr. Subba Reddy Mallampati
Manager - Environment

ENVIRONMENTAL LABORATORY
VIMTA LABS
REGD. No- DL 33004/99
Sr. No.-5
VIMTA

Vimta Labs Limited
Registered Office
142, IDA Phase II, Cherlapally
Hyderabad-500 051,Telangana, India
T : +91 40 2726 4141
F : +91 40 2726 3657

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ISSUED TO:	Report No.:	VLL/VLS/24-25/08958/001
M/s. Bharat Aluminium Company Limited,	Issue Date:	2024-09-05
KORBA (C.G.)	P.O.No:	8500005780
	P.O. Date:	2022-06-29

AMBIENT AIR QUALITY MONITORING AT MAINPAT MINES

Analysis starting date :- 2024-08-21 **Analysis Completion date :- 2024-08-30**

Tests required: Sulphur Dioxide (SO_2), Nitrogen Dioxide (NOx), Particulate Matter (PM10), Particulate Matter (PM2.5), Ammonia (NH_3), Benzene (C_6H_6), Benzo (a) Pyrene in particulate phase, Heavy metals in particulate phase for Arsenic, Nickel & Lead.

Parameters	Units	Limits	Test Results				
Sampling Date			2024-08-19	2024-08-19	2024-08-19	2024-08-19	Method
Sampling Location			Near Balco T/S	Office Area	Kesra Village	Camp No 2	
Sulphur Dioxide (SO_2)	mg/m^3	80	9.5	10.4	12.6	14.3	Improved West and Gaeke Method
Nitrogen Dioxide (NO_x)	mg/m^3	80	11.3	13.9	14.6	16.5	Modified Jacob & Hochheiser Method
Particulate Matter (PM10)	mg/m^3	100	43.4	46.1	56.7	58.5	Gravimetric Method
Particulate Matter (PM2.5)	mg/m^3	60	13.1	14.6	17.2	18.9	Gravimetric Method
Ammonia (NH_3)	mg/m^3	400	0.8	0.9	1.4	1.2	Indophenol Blue Method
Benzene (C_6H_6)	mg/m^3	5	<0.01	<0.01	<0.01	<0.01	Solvent Extraction followed by GC Analysis
Benzo(a) Pyrene in particulate phase	ng/m^3	1	<0.01	<0.01	<0.01	<0.01	Solvent Extraction followed by GC Analysis
Arsenic as As	ng/m^3	6	<1.0	<1.0	<1.0	<1.0	AAS/ICP Method
Nickel as Ni	ng/m^3	20	1.3	1.1	1.8	1.5	AAS/ICP Method
Lead as Pb	mg/m^3	1	0.009	0.013	0.017	0.015	AAS/ICP Method
Carbon Monoxide	mg/m^3	2000	346	371	429	395	NDIR Spectroscopy Method
Ozone	mg/m^3	100	2.0	1.8	2.1	2.4	UV photometric method

Dr. Subba Reddy Mallempati
Manager - Environment

ENVIRONMENTAL LABORATORY
Vimta
VIMTA LABS
REGD. No- DL 33004/99
Sr. No.-5
VIMTA

Secondary Internal (C3)

Vimta Labs Limited
Registered Office
142, IDA Phase II, Cherlapally
Hyderabad-500 051,Telangana, India
T : +91 40 2726 4141
F : +91 40 2726 3657

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ISSUED TO:		
M/s. Bharat Aluminium Company Limited, **KORBA (C.G.)**	Report No.:	VLL/VLS/24-25/12267/001
	Issue Date:	2024-10-05
	P.O.No:	8500005780
	P.O. Date:	2022-06-29

AMBIENT AIR QUALITY MONITORING AT MAINPAT MINES

Analysis starting date :- 2024-09-13 **Analysis Completion date :- 2024-09-24**

Tests required: Sulphur Dioxide (SO_2), Nitrogen Dioxide (NOx), Particulate Matter (PM10), Particulate Matter (PM2.5), Ammonia (NH_3), Benzene (C_6H_6), Benzo (a) Pyrene in particulate phase, Heavy metals in particulate phase for Arsenic, Nickel & Lead.

Parameters	Units	Limits	Test Results				
Sampling Date			2024-09-11	2024-09-11	2024-09-11	2024-09-11	Method
Sampling Location			Near Balco T/S	Office Area	Kesra Village	Camp No 2	
Sulphur Dioxide (SO_2)	mg/m^3	80	9.8	10.1	11.2	12.0	Improved West and Gaeke Method
Nitrogen Dioxide (NO_x)	mg/m^3	80	12.3	12.7	13.5	14.1	Modified Jacob & Hochheiser Method
Particulate Matter (PM10)	mg/m^3	100	47.1	49.3	54.8	59.4	Gravimetric Method
Particulate Matter (PM2.5)	mg/m^3	60	14.4	15.5	19.1	20.7	Gravimetric Method
Ammonia (NH_3)	mg/m^3	400	0.9	0.9	1.2	0.7	Indophenol Blue Method
Benzene (C_6H_6)	mg/m^3	5	<0.01	<0.01	<0.01	<0.01	Solvent Extraction followed by GC Analysis
Benzo(a) Pyrene in particulate phase	ng/m^3	1	<0.01	<0.01	<0.01	<0.01	Solvent Extraction followed by GC Analysis
Arsenic as As	ng/m^3	6	<1.0	<1.0	<1.0	<1.0	AAS/ICP Method
Nickel as Ni	ng/m^3	20	1.1	<1.0	1.3	<1.0	AAS/ICP Method
Lead as Pb	mg/m^3	1	0.008	0.010	0.014	0.012	AAS/ICP Method
Carbon Monoxide	mg/m^3	2000	379	354	397	342	NDIR Spectroscopy Method
Ozone	mg/m^3	100	1.4	1.5	2.2	1.9	UV photometric method

ENVIRONMENT LABORATORY VIMTA LABS Sr. No.-3 VIMTA

Dr. Subba Reddy Mallampati
Manager-Environment

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balco | BHARAT ALUMINIUM COMPANY LIMITED
P.O. - BALCO Nagar, Korba, CG
India - 495684

BALCO/Env/A-02(A)/2024/146

Date: 30.05.2024

To,
The Regional Officer (IRO),
Ministry of Environment and Forest, Climate Change,
Integrated Regional Office, Aranya Bhawan,
North Block, Sector-19,
Nava Raipur, Atal Nagar (CG) 492002.

Subject: Half Yearly Compliance Status Report (October 2023 to March 2024) of Mainpat Bauxite Mines, BALCO.

Dear Sir,

This is in reference to the general condition number thirteen (no. xiii), mentioned under the Environmental Clearance No. J-11015/235/2007-IA II (M), dated 26th October, 2010 & EC extension received vide letter dated 27/10/2015. Please find enclosed herewith the Half Yearly compliance report of our Mainpat Bauxite Mines.

We, on behalf of Bharat Aluminium Company Limited (herein referred to as BALCO) hope that the above is in line with the requirements under the referred Environmental Clearance. In case you require any further information or clarification, we would be glad to provide the same.

Thanking You,

Yours Truly,

Anil Mishra
Mines Manager
Mainpat Bauxite Mines

Enlc:- a/a

Copy to: The Regional Officer, Chhattisgarh Environment Conservation Board, Ambikapur (C.G).

भारत एल्यूमिनियम कम्पनी लिमिटेड
कोरबा, छत्तीसगढ़

सर्वसाधारण को सूचित किया जाता है कि पर्यावरण एवं वन मंत्रालय, भारत सरकार द्वारा भारत एल्यूमिनियम कम्पनी लिमिटेड (बालको) की मैनपाट बाक्साइट खदान की उत्खनन क्षमता 0.75 मिलियन टन प्रति वर्ष के लिए प्रदत्त पर्यावरण स्वीकृति की वैधता लीज् अवधि, जुलाई 8, 2012 तक बढा दी गई है. अनुमति पत्र क्रमांक जे-11015/235/2007-आई ए. II (एम) दिनांक अक्टूबर 26, 2010 की प्रति छत्तीसगढ़ पर्यावरण संरक्षण मंडल और पर्यावरण एवं वन मंत्रालय की वेबसाईट http://envfor.nic.in में उपलब्ध है.

कृते भारत एल्यूमिनियम कम्पनी लिमिटेड
कोरबा, छत्तीसगढ़

नवभारत बिलासपुर
31/10/10 कोरबा पृष्ठ 3

Bharat Aluminium Co. Ltd.
Korba, Chhattisgarh

PUBLIC NOTICE

This is to inform the general public that Ministry of Environment and Forests (MOEF) Govt. of India has Extended the validity of the Environmental Clearance for Mainpat Bauxite Mine of Bharat Aluminium Company Limited (BALCO) for Production Capacity 0.75 MTPA up to lease period of the mine i.e. upto 8th July 2012. A copy of the clearance letter no. J-11015/235/2007 IA.II (M) dt. October 26, 2010 is available with Chhattisgarh Environment Conservation Board and also at website of MOEF http://envfor.nic.in.

For Bharat Aluminium Co. Ltd.
Korba, Chhattisgarh.

Central Chronicle Raipur
31/10/10 pg-4.