

BALCO/ENV/A-02(A)/2018/¹⁴⁵

²²
May , 2018

Shri Kanwarjit Singh APCCF (C)
Ministry of Environment and Forest, Climate Change
Regional Office(WCZ),Ground Floor
East Wing, New Secretariat Building,
Civil Line,Nagpur-440001

Dear Sir,

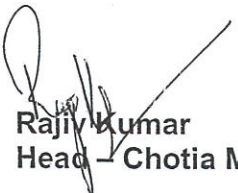
Sub: Half yearly compliance status (October- 2017 to March - 2018) for Chotia - 1
Captive coal mine.

Please find enclosed herewith the half yearly compliance report for the period
October-2017 to March-2018 of the Environmental Clearance No. J-
11015/96/2004-IA-II(M) dated 4th June 2015 (EC transferred from M/s Prakash
industries Limited to BALCO) for Chotia-1 Captive coal mining.

We hope that the above is in line with the requirements under the referred
Environmental Clearance. In case you would require any further information or
clarification, we would be glad to furnish the same.

Thanking you,

Yours truly,


Rajiv Kumar
Head - Chotia Mines



Copy to:
Regional Officer, CECB, **KORBA**

**Compliance status on Environmental Clearance
BALCO CHOTIA COAL MINES, KORBA (C.G.)**

Duration: **October- 2017 to March - 2018**

1. MoEF Letter No: J-11015/96/2004-IA.II (M), dated 4th June 2015 (Transfer of EC from M/s Prakash industries Limited to BALCO)

2. MoEF letter No: J – 11015/96/2004-IA. II (M) dated 10.11.2005.

Sl. No	Condition No	CONDITIONS GIVEN IN APPROVAL	STATUS OF IMPLEMENTATION
2.	A.	Specific Conditions:	
	(I)	The environmental clearance is subject to grant of forestry clearance by Ministry of Environment and Forests for diversion of 801.10 ha forestland under the provisions of Forest (Conservation) Act, 1980.	Agreed.
	(II)	Top soil should be stacked with proper slope at earmarked site (s) with adequate measures and should be used for reclamation and rehabilitation of mined out area.	Complied.
	(III)	OB dumps should be stacked at earmarked dump site (s) only and should not be kept active for long period. Proper terracing of OB dump should be carried out so that the overall slope will come down to 28 degree. Back filling should start from 3 rd year onwards. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self sustaining. Progress report should be submitted to the Ministry of Environment & Forests on 6 monthly basis.	Complied.
	(IV)	Catch Drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilized for watering the mine area, roads, greenbelt development etc. The drains should be regularly desilted and maintained properly. Garland Drain (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump should also provide adequate retention period to allow proper setting of silt material	Check dam with estimated storage capacity of 12000 KL is in place. Garland Drains are constructed around OB Dump area. Sump is also constructed and we are providing adequate retention period to allow proper setting of silt material.
	(V)	Dimension of the retaining wall at the toe of	Due care is being taken while designing

~~X~~

		dumps and OB benches within the mine to check run-off and siltation should be based on the rain fall data.	Dimension of retaining wall
	(VI)	During Underground Working regular monitoring of subsidence movement on the surface over working area and impact on water bodies/ vegetation/ structures/ surrounding should be continued till movement ceases completely. In case of observation of any subsidence movement, mitigative measures should be taken to avoid loss of life and material. Cracks should be effective plugged with ballast and clayey soil/ suitable material.	Underground Mining operation in Chotia Coal Block has not yet started. All conditions given in approval letter will be strictly observed as soon as we commence Underground operation.
	(VII)	During underground Working project authorities should check the possibility of existence of fault (s) before deciding about the thickness of safe barrier required to be maintained between the working face and the river in consultation with the Director General Mines & Safety (DGMS). De-pillaring should also be carried out after taking prior approval of the DGMS.	Underground Mining operation in Chotia Coal Block has not yet started. All conditions given in approval letter will be strictly observed as soon as we commence Underground operation.
	(VIII)	Stage wise seam development plans incorporating subsidence study and its reports starting from 5 th year of underground operation till the end of the mine at an interval of 5 years should be submitted to the Ministry within six months.	Underground Mining operation in Chotia Coal Block has not yet started. All conditions given in approval letter will be strictly observed as soon as we commence Underground operation.
	(IX)	Mine entries/ coal evacuation/ ventilation systems should be above the highest flood level to avoid any anticipated flooding of mine from surface water during rainy season.	Underground Mining operation in Chotia Coal Block has not yet started. All conditions given in approval letter will be strictly observed as soon as we commence Underground operation.
	(X)	Green belt should be raised by planting the native species around the ML area, Coal Handling Plants, roads, OB dump sites etc. in consultation with the local DFO/ Agriculture Department. The density of the trees should be around 2500 plants per ha.	Plants of only native species in consultation with Forest department are being planted. 10000 saplings were planted in the monsoon season of the year 2017.
	(XI)	The project authorities should meet the water requirement of nearby village (s) including agricultural need/ well water in case the village wells go dry to de-watering of the mine from mine discharge after proper setting/treatment.	The water levels in the nearby villages are monitored regularly and no such down in water level has been reported. However, drinking water is being supplied to the local villagers as a part of CSR activity.
	(XII)	The project authorities should implement suitable conservation measures to augment	Rain water harvesting structures has been constructed in office complex and

~~XXXX~~

		ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	Bachelor's hostel for recharge of ground water. The design of Rainwater harvesting structures was approved by Regional Director, CGWA-Raipur vide no. 35-1/NCCR/CGWA/Vol-X/038 dated 20th October 2016. Check dams and garland drains are maintained regularly.
	(XIII)	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometer during the mining operation. The monitoring should be carried out four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon (November and winter (January) and the data thus collected may be sent regularly to Ministry of Environment & Forests, Central Ground Water Authority and Regional Director Central Ground Water Board.	Regular monitoring of ground water level and Water Quality is being done at existing wells. A Piezometer has been constructed for monitoring the ground water. The data thus collected are being sent regularly to Ministry of Environment & Forests, Central Ground Water Authority and Regional Director, Central Ground Water Board. Water quality monitoring reports are attached herewith as Annexure-I
	(XIV)	Permission from the competent authority should be obtained for drawl of water required for mining and domestic use.	NOC for groundwater withdrawal of Chotia Coal Mine has been obtained from Central Ground Water Authority, New Delhi vide NOC No. CGWA/NOC/MIN/ORIG/2016/2206 dated 23 rd June, 2016. Please refer to Annexure-II
	(XV)	Coal handling plant should be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated	There is no Coal handling Plant at the Mine site. The ROM (Coal) is directly dispatched to EUP. However, adequate water Spraying arrangements has been provided for dust suppression due to Mining activities.
	(XVI)	Sewage Treatment Plant should be installed for the colony. ETP should also be provided for workshop & CHP waste water.	STP and septic tank is there in the colony for treating sewage waste water. ETP has also been constructed to treat the effluents from workshop.
	(XVII)	Consent to operate should be obtained from SPCB for the enhanced production.	Consent to operate obtained from Chhattisgarh Environment Conservation Board vide letter 4906 & 4908/TS/CECB/2017 Naya Raipur dated 08.12.2017 and is valid till 31.03.2019.
	(XVIII)	Blasting operation should be carried out only during day time. Controlled blasting should be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented	Blasting operation being carried out in day time only between 1pm-2pm. Controlled blasting technique is being practiced to minimize ground vibration & fly rocks.
	(XIX)	The project proponent should take all	All precautions are being taken during

~~X~~

	precautionary measures during mining operation for conservation and protection of endangered fauna namely <i>Melursus urcinus</i> (bear) etc. spotted in the study area in consultation with the concerned forest officials. Action plan for conservation of endangered fauna should be prepared and submitted to the Ministry and its Regional Office within 3 months.	mining operation for conservation and protection of endangered fauna. Fund for Wild Life Conservation and Management Plan has already been deposited to State Forest Department.
(XX)	A Final Mine Closer Plan along with details of Corpus Fund should be submitted to Ministry of Environment Forests 5 years in advance of final mine closer for approval.	Agreed.

B.	General Conditions:	
(I)	No change in mining technology and scope of working should be made without prior approval of Ministry of Environment & Forests.	Agreed.
(II)	No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.	Agreed.
(III)	Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with local forest department and experts.	Protection measures for flora & Fauna drawn up in consultation with Local Forest Department & Experts for time to time.
(IV)	Four Ambient Air Quality monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO ₂ , NO _x & CO monitoring. Location of the stations should be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.	In consultation with Chhattisgarh Environment Conservation Board, Four Ambient Air Quality Monitoring Stations (AAQMS) have been established. Monitoring of each station is being done regularly. AAQ Monitoring reports from the month of October 2017 to March 2018 are attached herewith as Annexure-III
(V)	Data of Ambient Air Quality (RPM, SPM, SO ₂ , NO _x & CO) should be regularly submitted to the Ministry including its Regional Office at Bhopal and the State Pollution Control Board / Central Pollution Control Board once in Six months.	Report of AAQM data are being sent regularly to all concerned. Refer to Annexure-III
(VI)	Fugitive dust emissions from all sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul road, wagon loading, dump trucks (loading & unloading) should be	Complied.

~~X~~

		provided and properly maintained. Vehicular emission should be kept under control and regularly monitored.	
	(VII)	Drills should either be operated with dust extractors or should be equipped with water injection system.	Complied.
	(VIII)	Adequate measures should be taken for control of noise level below 85 dBA in the work environment. Workers engaged in blasting and drilling operations of HEMM, etc should be provide with ear plugs/muffs.	Noise level is under control. Workers engaged in Drilling, Dozer, Pay Loader Operation are being provided with earplugs and muffs. Noise monitoring reports are attached herewith as Annexure-IV.
	(IX)	Industrial waste water (work shop and waste water from mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluent.	5 Check dams and Settling pond of adequate capacity (about 12000 KL) are already in place. Oil & Grease Trap is already in working condition.
	(X)	Acid mine water, if any, has to be treated and disposed of after conforming to the standard prescribed by the competent authority.	Mine water is non acidic.
	(XI)	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.	Persons working in dusty Environment are provided with dust mask. Initial Vocational Training given to all employees at the time of appointment. Apart from that, Issues on safety and health aspects are regularly discussed in Safety Committee Meeting every month.
	(XII)	Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to coal dust and take corrective measures, if needed. A Separate Environmental Management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.	Initial Medical checkup of all workers done at the time of appointment. Regularly medical checkup will be conducted for all employees. Separate Environmental Management Cell has already been set up in Chotia Mines.
	(XIII)	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Bhopal.	Budget & expenditure for EMP are maintained separately and not diverted for other purposes.
	(XIV)	The Regional Office of this Ministry located at	Agreed.

		Bhopal shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/ information/ monitoring reports.	
	(XV)	A copy of clearance letter will be marked to concerned Panchyat/ local NGO, if any, from whom and suggestion/ representation has been received while processing the proposal.	Agreed & complied
	(XVI)	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tahsildar's office for 30 days.	Not applicable
	(XVII)	The project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at web site of the Ministry of Environment & Forests at http://envfor.nic.in	Agreed.
3.		The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.	Agreed.
4.		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.	Agreed.
5.		The environmental clearance accorded shall be valid for a period of 5 years for starting construction/ operation of the power plant. In case, the project authorities fail to do so within this stipulated period, this environmental clearance shall stand lapsed automatically.	Agreed.
6.		The above conditions will be enforced <i>inter-alia</i> , 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.	Agreed.

~~X~~

Annexure - I

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

REF : BALCO/QAP1/POLL/IMS 04/File-05/CHOTIA-WATER/OCT-17

DATE -31/10/2017

Analysis Report of Chotia Mines Water

Sample received on . 28/10/2017

S.N.	Parameters	Units	Guest house	Weigh bridge	Chotia nalla up stream	Chotia nalla down stream confluence with Hasdeo river	Mines water from setting tank	Effluent oil & grease trap
1	pH		6.8	7.0	6.7	6.9	6.6	Mines Operation Temporarily suspended
2	Turbidity	NTU	1.8	6.4	13.4	12.2	24.0	
3	Conductivity	μ S/cm	103	107	96	173	124	
4	Total dissolved solid	mg/l	72	83	91	86	103	
5	Suspended Solid	mg/l	2	4	8	/	22	
6	Oil & Grease	mg/l	BDL	BDL	BDL	BDL	BDL	
7	B.O.D.	mg/l	BDL	BDL	BDL	BDL	1.5	
8	C.O.D.	mg/l	3	2	2	3	8	

Copy to :-
GM (HSE)

Analysed by

Approved by
Manager (QA)

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

REF : BALCO/QAP1/POLL/IMS 04/File-05/CHOTIA-WATER/NOV-17

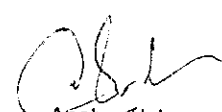
DATE -30/11/2017

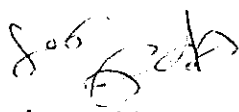
Analysis Report of Chotia Mines Water

Sample received on : 18/11/2017

S.N.	Parameters	Units	Guest house	Weigh bridge	Chotia nalla up stream	Chotia nalla down stream confluence with Hasdeo river	Mines water from setting tank	Effluent oil & grease trap
1	pH		6.7	7.0	6.5	6.9	6.7	Mines Operation Temporay suspended
2	Turbidity	NTU	1.6	3.5	11.9	14.3	15.7	
3	Conductivity	µS/cm	198	88	104	152	135	
4	Total dissolved solid	mg/l	113	139	110	90	93	
5	Suspended Solid	mg/l	1	5	9	8	20	
6	Oil & Grease	mg/l	BDL	BDL	BDL	BDL	BDL	
7	B.O.D.	mg/l	BDL	BDL	BDL	BDL	2	
8	C.O.D.	mg/l	2	3	4	2	9	

Copy to :-
GM (HSE)


Analysed by


Approved by
Manager (QA)

R. & C. LABORATORY (BALCO, KORBA)

Environment Monitoring Section

REF : BALCO/QAP1/POLL/IMS 04/File-05/CHOTIA-WATER/DEC-17

DATE -30/12/2017

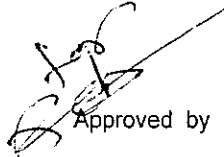
Analysis Report of Chotia Mines Water

Sample received on : 22/12/2017

S.N.	Parameters	Units	Guest house	Weigh bridge	Chotia nalla up stream	Chotia nalla down stream confluence with Hasdeo river	Mines water from settling tank	Effluent oil & greasc trap
1	pH		6.6	7.1	6.5	6.7	7.0	Mines Oporation Temporay suspended
2	Turbidity	NTU	1.4	4.2	6.6	8.1	11.6	
3	Conductivity	μ S/cm	186	93	78	86	244	
4	Total dissolved solid	mg/l	128	130	96	103	239	
5	Suspended Solid	mg/l	1	6	10	9	16	
6	Oil & Grease	mg/l	BDL	BDL	BDL	BDL	BDL	
7	B.O.D.	mg/l	BDL	BDL	BDL	BDL	2	
8	C.O.D.	mg/l	3	5	3	4	7	

Copy to :-
GM (HSE)


Analysed by


Approved by
Manager (QA)

R. & C. LABORATORY (BALCO, KORBA)

Environment Monitoring Section

REF : BALCO/QAP1/POLL/IMS 04/File-05/CHOTIA-WATER/JAN-18


DATE -31/01/2018


Analysis Report of Chotia Mines Water

Sample received on : 11/01/2018

S.N.	Parameters	Units	Guest house	Weigh bridge	Chotia nalla up stream	Chotia nalla down stream confluence with Hasdeo river	Mines water from settling tank	Effluent oil & grease trap
1	pH		6.5	6.9	6.8	6.9	7.0	Mines Operation Temporay suspended
2	Turbidity	NTU	2.7	1.6	7.3	5.4	6.8	
3	Conductivity	μ S/cm	138	146	94	87	118	
4	Total dissolved solid	mg/l	105	164	91	83	114	
5	Suspended Solid	mg/l	3	2	8	5	7	
6	Oil & Grease	mg/l	BDL	BDL	BDL	BDL	BDL	
7	B.O.D.	mg/l	BDL	BDL	BDL	BDL	3	
8	C.O.D.	mg/l	4	3	5	4	11	

Copy to :-
GM (HSE)


Analysed by


Approved by

Manager (QA)



R. & C. LABORATORY (BALCO, KORBA)

Environment Monitoring Section

REF : BALCO/QAP1/POLLUIMS 04/File-05/CHOTIA-WATER/FEB-18

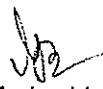
DATE - 28/02/2018

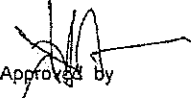
Analysis Report of Chotia Mines Water

Sample received on : 17/02/2018

S.N.	Parameters	Units	Guest house	Weigh bridge	Chotia nalla up stream	Chotia nalla down stream confluence with Hasdeo river	Mines water from settling tank	Effluent oil & grease trap
1	pH		6.6	7.1	6.6	7.2	6.7	Mines Operation Temporary suspended
2	Turbidity	NTU	1.3	2.5	28.0	6.6	8.1	
3	Conductivity	µS/cm	163	115	104	84	133	
4	Total dissolved solid	mg/l	137	120	93	80	141	
5	Suspended Solid	mg/l	1	3	19	7	9	
6	Oil & Grease	mg/l	BDL	BDL	BDL	BDL	BDL	
7	B.O.D.	mg/l	BDL	BDL	BDL	BDL	4	
8	C.O.D.	mg/l	2	4	4	3	13	

Copy to :-
GM (HSE)


Analysed by


Approved by
Manager (QA)

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

REF : BALCO/QAP1/POLL/IMS 04/File-05/CHOTIA-WATER/MARCH-18

DATE - 31/03/2018

Analysis Report of Chotia Mines Water
Sample received on : 13/03/2018

S.N.	Parameters	Units	Guest house	Weigh bridge	Chotia nalla up stream	Chotia nalla down stream confluence with Hasdeo river	Mines water from settling tank	Effluent oil & grease trap
1	pH		6.5	7.1	6.8	6.9	6.7	Mines Operation Temporary suspended
2	Turbidity	NTU	3.1	3.5	13.3	4.9	5.7	
3	Conductivity	µS/cm	181	98	132	138	108	
4	Total dissolved solid	mg/l	118	98	106	98	128	
5	Suspended Solid	mg/l	4	5	29	5	7	
6	Oil & Grease	mg/l	BDL	BDL	BDL	BDL	BDL	
7	B.O.D.	mg/l	BDL	BDL	BDL	BDL	3	
8	C.O.D.	mg/l	3	3	3	2	11	

Copy to :-
GM (HSE)

Analysed by

Approved by
Manager (QA)



MEMBER SECRETARY

केन्द्रीय भूमि जल प्राधिकरण
जल संसाधन, नदी विकास
एवम् गंगा संरक्षण मंत्रालय
भारत सरकार
नई दिल्ली

File No:- 21-4/309/CT/MIN/2015 - 1236

NOC No:- CGWA/NOC/MIN/ORIG/2016/2206

Central Ground Water Authority
Ministry of Water Resources,
River Development and Ganga Rejuvenation
Government of India
New Delhi

Dated :- 23 JUN 2016

To,

✓ Chotia Coal Mine
M/s Bharat Aluminium Company Limited.,
540 MW Power Plant- Cosmos Building, Balco Plant,
Korba - 495684, Chhattisgarh

Sub: - NOC for ground water withdrawal to Chotia Coal Mine of M/s Bharat Aluminium Company Limited., for their Coal mining project located at Village Chotiya, Block Podi Uparoda, District Korba, Chhattisgarh - reg.

Refer to your application on the above cited subject. Based on recommendations of Regional Director, Central Ground Water Board, North Central Chhattisgarh, Raipur vide their recommendations dated 18/01/2016 and further deliberations on the subject, the NOC of Central Ground Water Authority is hereby accorded to Chotia Coal Mine of M/s Bharat Aluminium Company Limited., for their Coal mining project located at Village Chotiya, Block Podi Uparoda, District Korba, Chhattisgarh. The NOC is, however subject to the following conditions:-

1. The firm may abstract 350 cu.m/day of ground water through ground water withdrawal through proposed one (1) borewell only and 1020 cu.m/day through dewatering the mine seepage on account of mining intersecting the water table. The total withdrawal including mine dewatering should not exceed 1370 cu.m/day (not exceeding 5,00,050 cu.m/year). No additional dewatering and ground water abstraction structures to be constructed for this purpose without prior approval of the CGWA.
2. The dewatering structures as well borewell to be fitted with water meter by the firm at its own cost and monitoring of ground water abstraction to be under taken accordingly on regular basis, at least once in a month. The ground water quality to be monitored twice in a year during pre- monsoon and post- monsoon periods.
3. M/s Bharat Aluminium Company Limited., shall, in consultation with the Regional Director, Central Ground Water Board, North Central Chhattisgarh Region, Raipur implement ground water recharge measures atleast to the tune of 2,75,575 cu.m/year as proposed, for augmenting the ground water resources of the area within six months from the date of issue of this letter. In addition, the firm shall adopt 3 to 4 nos. villages for Water Security Plan in District Korba, Chhattisgarh. The necessary guideline for the Water Security Plan is available on website of Ministry of Water Resources, RD & GR (www.mowr.gov.in). Both, the Demand Side Management /Supply Side Management with maintenance of structures in the said villages to be ensured and a comprehensive plan to be submitted to Regional

West Block - 2, Wing - 3, Sector - 1, R.K. Puram, New Delhi - 110066

Tel : 011-26175362, 26175373, 26175379 • Fax : 011-26175369

Website : www.cgwb.gov.in, www.mowr.gov.in

स्वच्छ सुरक्षित जल - सुन्दर खुशहाल कल

CONSERVE WATER - SAVE LIFE

Director, CGWB North Central Chhattisgarh Region, Raipur. Firm shall also undertake periodic maintenance of recharge structures at its own cost.

4. The photographs of the recharge structures after completion of the same are to be furnished immediately to the Regional Director, Central Ground Water Board, North Central Chhattisgarh Region, Raipur for verification and under intimation to this office.

5. The firm at its own cost shall install 8 to 10 piezometers fitted with automatic water level recorders with telemetry systems at suitable location and execute ground water regime monitoring programme in and around the project area on regular basis in consultation with the Central Ground Water Board, North Central Chhattisgarh Region, Raipur.

6. The ground water monitoring data in respect of S. No. 2 & 5 to be submitted to Central Ground Water Board, North Central Chhattisgarh Region, Raipur on regular basis at least once in a year.

7. The firm shall ensure proper recycling and reuse of waste water after adequate treatment.

8. Action taken report in respect of S. No. 1 to 7 may be submitted to CGWA within one year period.

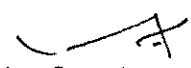
9. The permission is liable to be cancelled in case of non-compliance of any of the conditions as mentioned in S. No. 1 to 8.

10. This NOC is subject to prevailing Central/State Government rules/laws or Court orders related to construction of tubewell/ ground water withdrawal/ construction of recharge or conservation structures/ discharge of effluents or any such matter as applicable.

11. This NOC does not absolve the applicant / proponent of his obligation / requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.

12. The NOC does not imply that other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would consider the project on merits and be taking decisions independently of the NOC.

13. This NOC is valid till 2/06/2018.


Member Secretary

Copy to:

1. The Director, Ministry of Environment, Forests & Climate Change, (Impact Assessment Division), 3rd Floor, Vayu Bhawan, Indira Paryavaran Bhawan, Jorbagh Road, Aliganj, New Delhi-110003.


2. The Member Secretary, Chhattisgarh Environment Conservation Board, Commercial Complex, 1, Tilak Marg, Shiv Mandir Chowk, Main Road, Avanti Vihar, Raipur, Chhattisgarh with a request to ensure that the conditions mentioned in the NOC are complied by the firm.

3. The District Collector, Collectorate Office, District Korba, Chhattisgarh.

4. The Regional Director, Central Ground Water Board, North Central Chhattisgarh, Raipur. This has reference to your recommendation dated 18/01/2016.

5. TS to the Chairman, Central Ground Water Board, Bhujal Bhawan, Faridabad, Haryana.

6. Guard File 2016-17.


Member Secretary

Monthly Report for Ambient Air Quality Monitoring						
of Bharat Aluminium Company Limited, Chotia I OCM (in µg/m ³)						
Month :- October- 2017						
Location	Standards for Air Pollutants (in µg/m ³)	Direction from Guest house Chotia	Parameters			
			RPM(PMIC)	SPM	SO ₂	NO _x
Guest house L-1			100	500	80	4000
Near D.G.set L-2		NW	26.55	68.50	4.55	5.65
Dhansar Camp Near submersible pump L-3		NW	39.00	132.00	5.00	7.15
Near Weigh Bridge L-4		EN	29.00	114.00	3.55	4.75
			56.25	167.35	7.00	9.00
						340.00

BB 01/11/2017

Asst. Manager Environment
Chotia ocm

Monthly Report for Ambient Air Quality Monitoring

of Bharat Aluminium Company Limited, Chotia I OCM (in $\mu\text{g}/\text{m}^3$)

Month - November- 2017

Location	Direction from Guest house Chotia	Parameters				
		RPM(PM10)	SPM	SO2	NOx	CO
Standards for Air Pollutants (in $\mu\text{g}/\text{m}^3$)		100	500	80	80	4000
Guest house L-1		28.30	75.50	5.25	6.75	250.00
Near D.G.set L-2	NW	41.50	141.35	6.50	8.50	290.00
Dharsar Camp Near submersible pump L-3	NW	31.55	126.40	4.50	5.55	240.00
Near Weigh Bridge L-4	EN	60.00	185.00	8.55	10.65	315.00

BDS
08/11/2017

Asst. Manager Environment
Chotia ocm

Monthly Report for Ambient Air Quality Monitoring

of Bharat Aluminium Company Limited, Chotia I OCM (in $\mu\text{g}/\text{m}^3$)

Month :- December- 2017

Location	Direction from Guest house Chotia	Parameters				
		RPM(PM10)	SPM	SO2	NOx	CO
Standards for Air Pollutants (in $\mu\text{g}/\text{m}^3$)		100	500	80	80	4000
Guest house L-1	-	30.50	85.00	4.30	5.25	260.00
Near D.G.sar L-2	NW	44.00	152.00	7.50	9.60	310.00
Dhansar Camp Near submersible pump L-3	NW	33.30	134.25	5.40	7.50	230.00
Near Weigh Bridge L-4	EN	63.00	200.00	9.35	11.45	305.00

B.P.S. 01/10/2018

Asst. Manager Environment
Chotia ocm

Monthly Report for Ambient Air Quality Monitoring

of Bharat Aluminium Company Limited, Chotia I OCM (in $\mu\text{g}/\text{m}^3$)

Month :- January- 2018

Location	Direction from Guest house Chotia	Parameters				
		RPM(PM10)	SPM	SO2	NOx	CO
Standards for Air Pollutants (in $\mu\text{g}/\text{m}^3$)						
Guest house L-1	-	100	500	80	80	4000
Near D.G.set L-2	NW	33.00	97.00	3.80	6.00	270.00
Dhansar Camp	NW	47.00	165.00	6.00	8.00	325.00
Near submersible pump L-3	NW	35.00	140.00	8.30	10.00	255.00
Near Weigh Bridge L-4	EN	65.50	215.50	11.00	13.00	335.00

BPg 01/02/2018

Asst. Manager Environment
Chotia ocm

Monthly Report for Ambient Air Quality Monitoring

of Bharat Aluminium Company Limited, Chotia I OCM (in $\mu\text{g}/\text{m}^3$)

Month - February- 2018

Location	Direction from Guest house Chotia	Parameters				
		RPM(PM10)	SPM	SO2	NOx	CO
Standards for Air Pollutants (in $\mu\text{g}/\text{m}^3$)		100	500	80	80	4000
Guest house L-1		31.00	92.00	4.00	5.00	245.00
Near D.G.set L-2	NW	48.50	171.35	5.50	6.60	315.00
Dhansar Camp Near submersible pump L-3	NW	30.40	120.25	6.00	8.00	235.00
Near Weigh Bridge L-4	EN	61.30	197.50	13.00	12.00	325.00

BPB 21/03/2018


Asst. Manager Environment:
Chotia ocm

Monthly Report for Ambient Air Quality Monitoring

of Bharat Aluminium Company Limited, Chotia I OCM (in $\mu\text{g}/\text{m}^3$)

Month - March- 2018

Location	Direction from Guest house Chotia	Parameters				
		RPM(PM10)	SPM	SO ₂	NO _x	CO
Standards for Air Pollutants (in $\mu\text{g}/\text{m}^3$)						
Guest house L-1		100	500	80	4000	
Near D.G.set L-2	NW	29.00	83.00	3.50	4.50	255.00
Dharsar Camp Near submersible pump L-3	NW	45.40	157.50	7.00	9.00	335.00
Near Weigh Bridge L-4	EN	28.50	110.30	5.00	6.50	245.00
		59.00	178.00	9.00	11.00	350.00



 01/04/2018
 Asst. Manager Environment
 Chotia ocm

MONTHLY NOISE LEVEL MEASUREMENT DATA										
OF Bharat Aluminium Company Limited, CHOTIA - I OCM										
Month of October - 2017	LOCATIONS	SL. NO	DAY TIME				NIGHT TIME			
			Permissible Limit	Minimum	Maximum	Average	Permissible Limit	Minimum	Maximum	Average
			dB (A)	dB (A)	dB (A)	dB (A)	dB (A)	dB (A)	dB (A)	dB (A)
1	NEAR HAUL ROAD	LOCATION - 1	75dB(A)	52.5	57.2	54.85	70dB(A)	46.1	51.3	48.70
2	NEAR LOADING POINT	LOCATION - 2	75dB(A)	57.3	64.1	60.70	70dB(A)	50.2	55.4	52.80
3	GUEST HOUSE	LOCATION - 3	75dB(A)	49.4	55.6	52.50	70dB(A)	35.2	40.4	37.80
4	R.P.L. CAMP (WORK SHIP)	LOCATION - 4	75dB(A)	47.1	52.4	49.75	70dB(A)	40.2	46.1	43.15
5	CHOTIA VILLAGE	LOCATION - 5	75dB(A)	32.2	38.5	35.35	70dB(A)	26.3	31.2	28.75
6	MINE LUMP	LOCATION - 6	75dB(A)	60.2	65.3	62.75	70dB(A)	52.7	58.8	55.75
7	OPERATIONAL AREA DURING DRILLING	LOCATION - 7	75dB(A)	50.3	57.7	54.00	70dB(A)	45.4	50.5	47.95
8	WEIGH BRIDGE	LOCATION - 8	75dB(A)	55.8	61.9	58.85	70dB(A)	48.5	54.6	51.55
9	OPERATIONAL AREA OF HOVEL	LOCATION - 9	75dB(A)	48.5	54.1	51.30	70dB(A)	42.1	47.3	44.70
10	NEAR D.G ROOM	LOCATION - 10	75dB(A)	61.3	67.4	64.35	70dB(A)	50.5	58.6	54.55
11	SHELTER DURING BASTING	LOCATION - 11	75dB(A)	53.1	58.4	55.75	70dB(A)	39.2	44.3	41.75

BDS
Asst. Manager Environment
Chotia ocm

MONTHLY NOISE LEVEL MEASUREMENT DATA												
OF Bharat Aluminium Company Limited, CHOTIA - I OCM												
Month of November - 2017	LOCATIONS	SL. NO	DAY TIME				NIGHT TIME					
			Permissible Limit	Minimum	Maximum	Average	Permissible Limit	Minimum	Maximum	Average		
			dB (A)	dB (A)	dB (A)	dB (A)	dB (A)	dB (A)	dB (A)	dB (A)	dB (A)	dB (A)
	NEAR HAJL ROAD	LOCATION - 1	75dB(A)	46.2	51.3	48.75	70dB(A)	37.1	42.2	39.65		
2	NEAR LOADING POINT	LOCATION - 2	75dB(A)	51.2	56.4	53.80	70 dB(A)	40.2	45.5	42.85		
3	GUEST HOUSE	LOCATION - 3	75dB(A)	50.6	58.5	54.55	70dB(A)	43.5	48.6	46.05		
4	R.P.L. CAMP (WORK SHOP)	LOCATION - 4	75dB(A)	43.3	49.5	46.40	70dB(A)	36.8	44.5	40.65		
5	CHOTIA VILLAGE	LOCATION - 5	75dB(A)	33.2	35.4	39.15	70dB(A)	24.1	29.2	26.65		
6	MINE DUMP	LOCATION - 6	75dB(A)	47.1	54.4	50.75	70dB(A)	38.3	43.4	40.85		
-	OPERATIONAL AREA DURING ERECTION	LOCATION - 7	75dB(A)	45.5	50.2	47.85	70dB(A)	34.5	39.2	36.85		
8	WEIGH BRIDGE	LOCATION - 8	75dB(A)	48.0	57.3	52.50	70 dB(A)	42.1	50.2	46.15		
9	OPERATIONAL AREA OF SHOVEL	LOCATION - 9	75dB(A)	44.6	53.7	49.15	70 dB(A)	39.5	47.6	43.55		
10	NEAR D.G. ROOM	LOCATION - 10	75dB(A)	60.4	65.8	63.10	70dB(A)	51.6	56.7	54.15		
11	SHELTER DURING BLASTING	LOCATION - 11	75dB(A)	49.2	55.4	52.30	70dB (A)	35.5	41.2	38.35		

BBB 05/11/2017
Asst. Manager Environment
Chotia ocm


MONTHLY NOISE LEVEL MEASUREMENT DATA OF Bharat Aluminium Company Limited, CHOTIA - I OCM										
Month of December - 2017	SL. NO	LOCATIONS	DAY TIME			NIGHT TIME				
			Permissible Limit	Minimum	Maximum	Average	Permissible Limit	Minimum	Maximum	Average
1	NEAR HAUL ROAD	LOCATICN - 1	75dB(A)	50.1	55.3	52.70	70dB(A)	44.4	49.2	46.80
2	NEAR LOADING POINT	LOCATICN - 2	75dB(A)	57.5	62.1	59.80	70dB(A)	48.2	53.3	50.75
3	GUEST HOUSE	LOCATICN - 3	75dB(A)	45.2	50.4	47.80	70dB(A)	35.5	41.4	38.50
4	R.P.L. CAMP (WORK SHOP)	LOCATICN - 4	75dB(A)	38.3	44.2	41.25	70dB(A)	33.7	39.8	36.75
5	CHOTIA VILLAGE	LOCATION - 5	75dB(A)	30.4	37.5	33.95	70dB(A)	25.3	31.6	28.45
6	MINE DUMP	LOCATICN - 6	75dB(A)	52.6	61.7	57.15	70dB(A)	45.8	50.9	48.35
7	OPERATIONAL AREA DURING DRILLING	LOCATICN - 7	75dB(A)	54.8	59.3	57.35	70dB(A)	50.2	55.3	52.75
8	WEIGH BRIDGE	LOCATICN - 8	75dB(A)	53.1	60.5	56.80	70dB(A)	47.6	52.7	50.15
9	OPERATIONAL AREA OF SHOVEL	LOCATICN - 9	75dB(A)	41.7	46.8	44.25	70dB(A)	32.1	37.5	34.80
10	NEAR D.G. ROOM	LOCATION - 10	75dB(A)	63.6	68.7	66.15	70dB(A)	55.4	60.3	57.85
11	SHELTER DURING BLASTING	LOCATION - 11	75dB(A)	43.2	48.8	46.00	70dB(A)	32.6	38.4	35.50

BPP 01/10/2018

Asst. Manager Environment
Chotia ocm

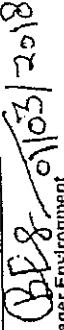
MONTHLY NOISE LEVEL MEASUREMENT DATA
OF Bharat Aluminium Company Limited, CHOTIA - I OCM

	Month of January - 2018	SL. NO	Permissible Limit	DAY TIME			Permissible Limit	NIGHT TIME		
				Minimum	Maximum	Average		Minimum	Maximum	Average
	LOCATIONS		75dB(A)	dB (A)	dB (A)	70 dB(A)	dB (A)	dB (A)	dB (A)	dB (A)
1	NEAR HAUL ROAD	LOCATION - 1	75dB(A)	55.4	66.6	58.00	70dB(A)	47.7	52.8	50.25
2	NEAR LOADING POINT	LOCATION - 2	75dB(A)	51.1	58.3	54.70	70 dB(A)	45.6	50.7	48.15
3	GUEST HOUSE	LOCATION - 3	75dB(A)	40.2	46.6	43.40	70dB(A)	30.5	35.9	33.20
4	R.P.L. CAMP (WORK SHOP)	LOCATION - 4	75dB(A)	35.6	41.4	38.50	70dB(A)	28.3	34.2	31.25
5	CHOTIA VILLAGE	LOCATION - 5	75dB(A)	31.8	38.9	35.35	70dB(A)	26.6	32.5	29.55
6	MINE DUMP	LOCATION - 6	75dB(A)	49.4	54.5	51.95	70dB(A)	43.2	48.6	45.90
7	OPERATIONAL AREA DURING DRILLING	LOCATION - 7	75dB(A)	46.5	52.2	49.35	70dB(A)	41.4	47.3	44.35
8	WEIGH BRIDGE	LOCATION - 8	75dB(A)	56.3	61.6	58.95	70 dB(A)	49.2	54.4	51.80
9	OPERATIONAL AREA OF SHOVEL	LOCATION - 9	75dB(A)	38.8	44.9	41.85	70 dB(A)	33.6	39.7	36.65
10	NEAR D.G. ROOM	LOCATION - 10	75dB(A)	59.9	64.8	62.35	70dB(A)	53.3	58.5	55.90
11	SHELTER DURING BLASTING	LOCATION - 11	75dB(A)	39.7	45.6	42.65	70dB (A)	34.4	40.8	37.60



 01/02/2018
 Asst. Manager Environment
 Chotia ocm

MONTHLY NOISE LEVEL MEASUREMENT DATA										
OF Bharat Aluminium Company Limited, CHOTIA - JOCM										
Month of February - 2018	LOCATIONS	S. NO	DAY TIME				NIGHT TIME			
			Permissible Limit	Minimum	Maximum	Average	Permissible Limit	Minimum	Maximum	Average
			75dB(A)	dB (A)	dB (A)	dB (A)	70 dB(A)	dB (A)	dB (A)	dB (A)
1	NEAR HAUL ROAD	LOCATION - 1	75dB(A)	48.5	54.6	51.55	70dB(A)	43.2	49.4	46.30
2	NEAR LOADING POINT	LOCATION - 2	75dB(A)	53.2	59.8	56.50	70 dB(A)	46.1	51.2	48.50
3	GUEST HOUSE	LOCATION - 3	75dB(A)	43.1	49.7	46.40	70dB(A)	35.5	40.6	38.35
4	R.P.L. CAMP (WORK SHOP)	LOCATION - 4	75dB(A)	40.3	45.4	42.85	70dB(A)	30.7	36.8	33.75
5	CHOTIA VILLAGE	LOCATION - 5	75dB(A)	35.6	41.3	38.45	70dB(A)	27.8	33.7	30.75
6	MINE DUMP	LOCATION - 6	75dB(A)	54.2	60.1	57.15	70dB(A)	45.2	50.3	47.75
7	OPERATIONAL AREA DURING DRILLING	LOCATION - 7	75dB(A)	50.2	55.4	52.80	70dB(A)	43.3	48.4	45.55
8	WEIGH BRIDGE	LOCATION - 8	75dB(A)	52.6	58.7	55.65	70 dB(A)	42.5	50.2	46.35
9	OPERATIONAL AREA OF SHOVEL	LOCATION - 9	75dB(A)	42.5	47.6	45.05	70 dB(A)	35.1	40.3	37.70
10	NEAR D.C. ROOM	LOCATION - 10	75dB(A)	62.2	68.1	65.15	70dB(A)	55.5	60.6	58.05
11	SHELTER DURING BLASTING	LOCATION - 11	75dB(A)	45.1	50.3	47.70	70dB (A)	32.2	38.8	35.50


 01/03/2018
 Asst. Manager Environment
 Chotia ocm

MONTHLY NOISE LEVEL MEASUREMENT DATA OF Bharat Aluminium Company Limited, CHOTIA - I OCM										
Month of March - 2018	SL. NO	LOCATIONS	Permissible Limit	DAY TIME			Permissible Limit	NIGHT TIME		
				Minimum	Maximum	Average		Minimum	Maximum	Average
			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
1		NEAR HAUL ROAD	75dB(A)	45.20	50.30	47.75	70dB(A)	39.10	44.20	41.65
2		NEAR LOADING POINT	75dB(A)	50.50	55.60	53.05	70dB(A)	42.60	49.70	46.05
3		GUEST HOUSE	75dB(A)	41.30	47.70	44.50	70dB(A)	33.50	38.60	36.05
4		R.P. CAMP (WORK SHOP)	75dB(A)	36.40	42.50	39.45	70dB(A)	28.10	34.20	31.15
5		CHOTIA VILLAGE	75dB(A)	33.30	39.40	36.35	70dB(A)	25.40	30.50	27.95
6		MINE LUMP	75dB(A)	51.50	57.60	54.55	70dB(A)	40.10	45.20	42.65
7		OPERATIONAL AREA DURING DRILLING	75dB(A)	44.20	49.70	46.95	70dB(A)	37.60	43.80	40.70
8		WEIGH BRIDGE	75dB(A)	54.30	59.50	56.90	70dB(A)	43.40	48.60	46.00
9		OPERATIONAL AREA OF SECVE.	75dB(A)	35.10	40.20	37.55	70dB(A)	30.30	35.40	32.85
10		NEAR D.G. ROOM.	75dB(A)	57.50	63.60	60.55	70dB(A)	51.40	56.70	54.05
11		SHELTER DURING BLASTING	75dB(A)	42.40	48.50	45.45	70dB(A)	36.10	41.20	38.65

BBP 01/04/2018
Asst. Manager Environment
Chotia ocm