



**REGIONAL OFFICE
C.G. ENVIRONMENT CONSERVATION BOARD,
NEAR TEHSIL OFFICE RAMPUR, KORBA, DISTT-KORBA(C.G.)
Email Id:- rocebkorba@gmail.com**

No. **378** /R.O./ C.E.C.B/2022

Korba. Dated: **29/06/2022**

To,

✓ The Registrar,
Hon'ble National Green Tribunal,
Faridkot House, Copernicus Marg,
New Delhi – 110 001.

Subject:- Order of the Hon'ble NGT in the Original Application No. 188/2022 (PB) Anil Kumar Vs. State of Chhattisgarh.

Reference:- Order of The Honorable Tribunal dated 20/04/2022 passed in OA no. 188/2022 (PB).

Respected Sir/Madam,

As per the order dated 20/04/2022 of the Honorable Tribunal in OA no.188/2022(PB), Anil Kumar Vs. State of Chhattisgarh a joint committee formed by Tribunal for inspection of the site and submission of factual and action taken report of M/s Bharat Aluminum Company Limited, Balco Nagar Korba, District-Korba (C.G.). In compliance of the above order the factual and action taken report is hereby attached with this letter for your kind perusal and necessary further action.

Attachment: As per above.

Asaly

Regional Officer,

Chhattisgarh Environment Conservation Board,
Korba (C.G.)

Entd. No. /R.O./ C.E.C.B/2022

Korba. Dated: / /2022

Copy to: The Member Secretary, Chhattisgarh Environment Conservation Board, Nawa Raipur Atal Nagar, Raipur for favor of information please.

Regional Officer,

Chhattisgarh Environment Conservation Board,
Korba (C.G.)

JOINT COMMITTEE REPORT
ON

**Hon'ble NGT(PB) order dated 20th April 2022 in
Original Application No. 188/2022 in the matter of
Dr. Anil Kumar Vs State of Chhattisgarh**

(Date of Inspection: 1st to 3rd June, 2022)

By
Joint Committee members

- 1. Smt. Ranu Sahu, Collector Korba, District-Korba (C.G.)**
- 2. Shri. P. Jagan, Regional Director, Central Pollution Control Board Bhopal(M.P.)**
- 3. Dr.Bhardwaj Adiraju, Scientist "C" Integrated Regional Office Raipur, MoEF&CC Govt. of India.**
- 4. Shri Rakesh Dewangan, Scientist " B" Central Ground water Board, Raipur (C.G.)**
- 5. Shri. Ankur Sahu, Regional Officer, Chhattisgarh Environment Conservation Board, Korba (C.G.)**

**Factual and Action taken Report of the Joint Committee
Constituted by Hon'ble NGT (PB) Order Dated 20th April
2022 in OA No. 188/2022 in the Matter of Dr. Anil
Kumar Vs State of Chhattisgarh**

Hon'ble NGT (Principal Bench), New Delhi vide its order dated 20th April, 2022 in OA no. 188/2022 ‘Dr. Anil Kumar Vs State of Chhattisgarh’ directed under Para 1&2 as :-

1. The grievances of the applicant are that Bharat Aluminium Company Ltd. (BALCO) is illegally dumping hazardous red mud waste in and around Korba town and covering the same by soil in violation of environmental norms. It is stated that red mud, which is generated during manufacturing of aluminium, contains toxic elements- fluoride, sodium, calcium, lithium, phosphorus, iron, manganese, silica, titanium, zinc, beryllium, caustic, sodium hydroxide etc., which requires safe disposal on secure land fill site. After commencement of production in the Year 1974-1975 in the plant having 1 lakh Ton capacity, red mud waste was kept in 6/7 big tanks. After taking over management, Vedanta Group increased the plant capacity from 1 lakh Tonnes to 5.7 Tonnes. Illegal dumping of red mud waste in and around Korba town causes degradation of soil and contaminates groundwater making the same unfit for use and also poses serious risk to lives and health of inhabitants. Prescribed SOP is also not being followed in disposal of fly ash which also spreads over entire Korba town aggravating environmental pollution.

2. Having regard to the seriousness of the allegations, we are of the view that there is a substantial question of protection and improvement of the environment and, therefore, it is necessary to have the factual and action taken report in the matter. We, accordingly, constitute and direct Joint Committee of the MoEF & CC, CPCB, CGWA, State PCB, and District Magistrate, Korba to look into the grievances of the applicant and take requisite action by following due process of law. The State PCB will be the Nodal agency for coordination and compliance. The Joint Committee may meet within four weeks and undertake site visits, look into the grievances of

the applicant and take requisite action and may thereafter furnish factual and action taken report in terms of management of red mud (high volume waste) for the present matter in question as per national guidelines applicable for other similar type of industrial establishments within two months.

In compliance of the Hon'ble NGT order the following committee members are nominated for conducting the field visit and submitting the factual and action taken report by the concerned departments:-

1. Smt. Ranu Sahu, Collector Korba, District-Korba (C.G.)
2. Shri. P. Jagan, Regional Director, Central Pollution Control Board Bhopal (M.P.)
3. Dr.Bhardwaj Adiraju, Scientist "C" Integrated Regional Office Raipur, Ministry of Environment, Forest and Climate Change Govt. of India.
4. Shri Rakesh Dewangan, Scientist "B" Central Ground water Board, Raipur (C.G.)
5. Shri. Ankur Sahu, Regional Officer, Chhattisgarh Environment Conservation Board, Korba (C.G.)

In compliance of the above order, the committee has organised the 1st meeting through video conferencing on 18.05.2022 at 11:00 AM and attended by all the members and decided to conduct the field visit in the 1st week of June 2022.

The minutes of the above meeting is enclosed at (**Annexure-I**).

As decided in the meeting, the joint committee visited the M/s. Balco plant Ltd., Ash Dyke area on the abandoned red mud pond, fly ash dumping area (low lying areas), total 18 water samples were collected from different water resources such as Hand pump (11), Borewell (2), Nallah (4) and Hasdeo River (1) located in the vicinity of the area, Ambient Air quality monitoring has been conducted at 4 different locations in and around the BALCO area and stack emission monitoring has been conducted in all the existing stacks which are in operational inside the BALCO plant during the site visit conducted from 1st – 3rd June, 2022.

The Nodal officer of the committee has sent a letter the applicant (**Annexure -II**) to present before the committee for for submission of information and facts

related to the case. The applicant Dr. Anil Kumar has present before the committee on 2.06.2022 at Regional Office, Korba during the meeting the committee members has discussed dilebetrly with applicant regading the issues mentioned in the petition. The committee requested the applicant to provide the copy of Annexure -1 which was stated in his petition copy however, the applicant could not produce the same before the committee.

The status of the grievances raised by the applicant has been verified by the committee during the field visit and the factual status of the grievance are summarised below:

Issue No. 01: Bharat Aluminium Company Ltd. (BALCO) is illegally dumping hazardous red mud waste in and around Korba town and covering the same by soil in violation of environmental norms.

- i. M/s BALCO, Korba was established in the year 1965 and started production from 1973 with a capacity of 1 LTPA Soderberg Smelter and 2 LTPA Alumina Plant from 1973-74 to 2009-10. However, BALCO's new Smelter with prebaked technology and 540 MW Power Plant has also started from the year 2005-06.
- ii. The Alumina plant was operated to produce Alumina from bauxite through Bayer's Process (**Annexure-III**), which was used as raw material in Aluminium metal production. Red mud was generated from Alumina plant, which is considered as waste material of alumina plant and disposed in to a total number of 7 red mud ponds constructed near the plant premises.
- iii. These red mud ponds were operated till 2009, as BALCO stopped the production of Alumina from September 2009 due to closure of Soderberg smelter plant and quality of Alumina powder produced by this plant was not adequate for new pre baked smelters. Therefore, industry stopped Alumina plant and bringing Alumina from Domestic and imported markets for production of Aluminium through pre baked smelters.
- iv. As per the records submitted by the industry to the joint committee it has been observed that a total quantity of 61.87 lakh MT Red mud has been generated during the period 1973- 2010.
- v. During the visit the industry has informed to the committee that Alumina Plant is not in operation since 24th September 2009. Project Authority has informed about the closure of unit to the CECB vide letter dated 23.09.2013

and copy of the same is enclosed as **(Annexure-IV)**. M/s BALCO officials and other staff informed that before the closure of the Alumina unit industry used to collect the Red Mud in 7 Red Mud ponds. These Red Mud Ponds are converted into Ash dykes as per the Environment Clearance granted to industry for installation of power plants 540MW and 1200 MW by the Ministry of Environment, Forest and Climate change Govt. of India. **(Annexure-V)**. Design of conversion of red mud ponds to Ash dyke has been prepared by Dr. Umesh Dayal Retd. Prof., IIT Kanpur. Accordingly, NOC's have been granted by CECB and the copies of NOC's are attached as **(Annexure- VI)**.

- vi. The committee visited the red mud ponds area on 1st June 2022 and it has been observed that red mud ponds are converted to Ash dyke. No excavation of red mud area has been observed.
- vii. As requested by the applicant the committee revisited the red mud ponds area on 2nd June, 2022 and the applicant unable to show the committee about the excavated area and the areas/locations where the red mud is being dumped illegally by the industry.

Issue No. 02: Illegally dumping hazardous red mud waste in and around Korba town causing degradation of soil and also poses serious risk to lives and health of inhabitants, Air and water pollution deteriorates the environmental quality:

- i. The committee observed that there is no illegal dumping of hazardous red mud waste in and around Korba town.
- ii. During the discussions with the applicant at the Regional Office, Korba, Chhattisgarh applicant requested to visit one dumping site (Khasra No.1194/6, 1194/3, 1112/2, 1112/4, 1194/6, 1193, 1203/1, 1203/2, 1194/7, 1202/2, 1202/3, 1120/2, 1120/3, 1191/1 kha, 1191/3, 1206, 1194/2, 1195/1, 1112/3, 1070/17, 1031, 1102/6 1158/4, 1162/1gh, 1159/4, 1161/1/ka, 1162/1B, 1121, 1190/1, 1190/2, 1191/4, 1194/1, 1196/4, 1162/1tr, 1119/2, 1119/5, 116/7/1, 1167/2, 1070/19, 1070/20, 1070/21, 1070/23, 1070/27, 1070/28, 1029/29. **Total Rakba-22.38 Acre.**, where the industry has illegally dumped the red mud waste.
- iii. Accordingly, the committee visited the said site along with the applicant and no red mud or any hazardous waste has been found on the day of visit **(Fig.no.-2)**

The committee has collected the following information for confirmation of the facts:

1. Ground and surface water quality monitoring:

A total number of 18 water samples were collected from different water resources such as Hand pump (11), Borewell (2), Nallah (4) and Hasdeo River (1) located in the vicinity of the area.

Table-I. Sampling locations along with their source (annexure-VII)

S.NO.	District	Location	lat	Long	Source	Date of collection
1	Korba	Village-Parsabhatha	22.4053	82.7357	Hand Pump	01-06-22
2	Korba	Village-Rogbahari	22.4219	82.7443	Hand Pump	01-06-22
3	Korba	Belgirinallha up stream	22.4092	82.7575	Nalla	01-06-22
4	Korba	Belgirinallha down stream	22.3998	82.7119	Nalla	02-06-22
5	Korba	Dengurnallhadown stream	22.3777	82.7278	Nalla	02-06-22
6	Korba	Lalghat	22.3896	82.7457	Hand Pump	02-06-22
7	Korba	Dengurnallhaup stream	22.3858	82.7510	Nalla	02-06-22
8	Korba	Village-Salihabhatha	22.3293	82.7760	Hand Pump	02-06-22
9	Korba	Village-Bhaisma	22.2680	82.7761	Hand Pump	02-06-22
10	Korba	Village-Kukricholi	22.2766	82.7466	Hand Pump	03-06-22
11	Korba	Down stream near UrgaVillage,Korba	22.2758	82.7345	Hasdeo River	03-06-22
12	Korba	Village-Naktikhar	22.3430	82.7726	Hand Pump	03-06-22
13	Korba	Village-Risdi	22.3672	82.7623	Hand Pump	03-06-22
14	Korba	Rampur Korba	22.3679	82.7466	Borewell	03-06-22
15	Korba	Village-Dader	22.3407	82.7441	Hand Pump	03-06-22
16	Korba	Village-Kharmora	22.3550	82.7484	Borewell	02-06-22
17	Korba	Village-Dumardih	22.4067	82.7892	Hand Pump	02-06-22
18	Korba	Village-Risda	22.3914	82.7544	Hand Pump	01-06-22

Table-II. Analytical Results of Basic Parameters in the water samples collected from the Korba area (Annexure-VII)

Sr.	Location	PH	EC μS/cm	CO3 mg/l	HCO3 mg/l	Cl mg/l	NO3 mg/l	SO4 mg/l	F mg/l	TH mg/l	Ca mg/l	Mg mg/l	Na mg/l	K mg/l
1	Parsabhatha	6.91	557	0	291	18	0.0	12.7	0.28	135	40	8.4	74.72	1.2
2	Rogbahari	7.42	430	0	87	42	70.4	24.9	0.15	150	32	16.8	37.56	3.77
3	Belgirinallha up stream	7.03	112	0	43	11	0.0	7.1	0.01	50	14	3.6	2.69	5.69
4	Belgirinallha down stream	7.64	311	0	118	18	1.4	46.6	0.39	100	24	9.6	34.05	6.11
5	Dengurnallha down stream	6.79	173	0	56	18	1.0	20.3	1.09	60	16	4.8	10.83	7.63
6	Lalghat	6.77	227	0	118	18	6.3	6.8	0.02	100	30	6	10.62	1.72
7	Dengurnallhaup stream	7.04	116	0	50	11	0.2	13.8	0.1	45	8	6	4.05	8.07
8	Salihabhatha	7.21	238	0	93	21	25.6	5.5	0.29	95	32	3.6	8.75	4.31
9	Bhaisma	7.14	1076	0	298	91	49.8	65.2	0.56	315	42	50.4	98.69	7.24
10	Kukricholi	6.87	1496	0	409	151	21.0	94.7	0.02	325	64	39.6	179	9.55
11	Downstream Nr Urga Village	7.21	193	0	81	11	2.4	26.2	0.23	80	20	7.2	7.86	3.47
12	Naktikhar	7.05	143	0	74	11	0.0	5.6	0.05	75	22	4.8	1.61	4.46
13	Risdi	7.62	244	0	50	25	27.4	17.0	0.08	55	18	2.4	23.25	7.96
14	Korba	7.53	69	0	12	11	6.8	4.1	0.08	25	4	3.6	2.09	6.83
15	Dader	7.21	315	0	37	49	51.4	4.1	0.07	65	20	3.6	35.65	9.17
16	Kharmora	7.06	67	0	19	7	9.0	2.8	0.08	20	6	1.2	2.24	6.27
17	Dumardih	7.49	140	0	81	11	0.0	3.8	0.05	55	12	6	2.01	4.87
18	Village-Risda	7.06	572	0	118	63	71.4	13.1	0.07	235	42	31.2	14	12.9

Table-III. Analytical Results of heavy metals in the water samples collected from Korba area (Annexure-VII)

Sr.	Location	Pb (mg/l)	Fe (mg/l)	Mn (mg/l)	Cu (mg/l)	Cr (mg/l)
1	Parsabhatha	0	ND	0.018	ND	ND
2	Rogbahari	0	0.29	0.018	ND	ND
3	Belgirinallha up stream	0	0.13	0.005	ND	ND
4	Belgirinallha down stream	0	ND	0.083	ND	ND
5	Dengurnallha down stream	0	ND	0.135	ND	ND
6	Lalghat	0	ND	0.148	ND	ND
7	Dengurnallhaup stream	0	0.06	0.148	ND	ND
8	Salihabhatha	0	1.98	0.33	ND	ND
9	Bhaisma	0	1.73	0.291	ND	ND
10	Kukricholi	0	ND	0.109	ND	ND
11	Downstream Nr Urga Village	0	ND	0.109	ND	ND
12	Naktikhar	0	4.95	0.005	ND	ND
13	Risdi	0	1.035	0.369	ND	ND
14	Korba	0	ND	0.135	ND	ND

Sr.	Location	Pb (mg/l)	Fe (mg/l)	Mn (mg/l)	Cu (mg/l)	Cr (mg/l)
15	Dader	0	0.161	0.356	ND	ND
16	Kharmora	0	0.126	0.044	ND	ND
17	Dumardih	0	2.014	0.057	ND	ND
18	Village-Risda	0	ND	0.538	ND	ND

- a) The results of the chemical analysis of all the 18 water samples collected from the Balco, Korba area, were compared to the Drinking Water Standards as prescribed by the Bureau of Indian Standards (2012).
- b) The monitoring results of basic parameters are well within the acceptable limit as per the BIS standard.
- c) As far as Fluoride contamination is concerned, all the samples are within the acceptable limits of BIS, i.e. below 1.5 mg/lit.
- d) High nitrate concentration (45 mg/l) was recorded in Rogbahari, Bhaisma, Dadar and Risda areas.
- e) Copper, Zinc, Chromium, and Lead were recorded within the BIS prescribed limits of drinking water.

2. Information from Agricultural Department:

- a) During visit the committee has requested the agriculture department Govt of Chhattisgarh at Korba to provide the copy of report if any study conducted on soil degradation in and around Korba area.
- b) In reply to committee's request, the agriculture department has informed that due to no complaint about soil degradation, the department has not carried out any such study(**Annexure-VIII**).

3. Information from State Health Department:

- a) The reports obtained from the CMHO, Korba Chhattisgarh in not inline with the issues raised by the applicant in the petition (**Annexure-IX**).

4. Ambient air quality monitoring:

- a) Ambient air quality monitoring was carried out at 4 locations for 24 hours for PM₁₀, PM_{2.5}, SO₂&NO_x in the villages around BALCO plant.
- b) A total number of 04 ambient air quality monitoring stations were installed and monitoring was carried out for 24-hour basis and assessed the day and night air quality of the area. The value at all monitoring locations were found within the NAAQS. The concentration of primary gaseous pollutants i.e. PM₁₀, PM_{2.5}, SO₂ & NO_x were found within the limit(**Annexure-X**)

- c) The industry has installed one Continuous Ambient Air Quality Station (CAAQMS) at Balco Plant Parsabhata gate and it was found operational during visit. The CAAQMS data for the period 01.06.2022 to 03.06.2022 were also collected and analysed and it was observed that the CAAQMS data showing that the all the parameter are within the NAAQM standards the same was places as (**Annexure-XI**).

5. Stack Emission monitoring:

- a) The major source of air pollution is from power plant and smelters. The major stacks are FTP stacks in smelters and power plant stacks. The stack emission monitoring has been conducted at all the operational stacks for consented parameters i.e. PM, NO_x and SO₂.
- b) In BALCO plant, there are total 24 major process stacks out of those 20 stacks have been found operational remaining stacks were under scheduled maintenance during visit and monitoring has been conducted all the operational during the joint committee visit.
- c) At the time of visit, 540 MW Power plant U#1, U#2 and 1200 MW Power plant U#2, U#4 were not in operation due to scheduled maintenance and other exigencies. The details of non-operational units at the time of visit are enclosed as (**Annexure-XII**).
- d) Stack emission monitoring report obtained from Regional Office, Korba Chhattisgarh has been analysed and it was observed that for the 540 MW stack PM and NO_x are with in the prescribed limits and SO₂ has been reported 1024 mg/Nm³ and 1124 mg/Nm³ for unit #3 and Unit #4 respectively which clearly indicated that the SO₂ norms has been exceeds the prescribed limits i.e. 600 mg/Nm³ (**Annexure- XIII**).
- e) In the case of 1200 MW plant similar trends has been observed the SO₂ values for Unit#1 and Unit #3 are 980 mg/Nm³ and 1040 mg/Nm³ respectively it was also clearly indicated that the SO₂ norms has been exceeds the prescribed limits i.e. 600 mg/Nm³ (**Annexure-XIV**).
- f) As per CPCB guidelines and EC Industry shall install OCEMS in all the existing stacks. During the visit the same has been verified and it was observed that OCEMS has been installed by the Project authorities in all the existing stacks.
- g) The OCEMS data of 1200 MW plant stacks and 540 MW stacks has been observed for the period 1st – 3rd June, 2022 and it was also clearly indicted

that that the SO₂ norms has been exceeds the prescribed limits i.e. 600 mg/Nm³ (**Annexure-XV**)

- h) As per CPCB guidelines all the power plants shall install the FGD units in their respective plants to control the SO₂ emission levels by 31.12.2023 (**Annexure-XVI**)
- i) However, on the day of visit work related to installation FGD unit was not observed. Project authorities didn't provide any time line for installing the same.

Issue no. 3: Prescribed SOP is not being followed in disposal of fly ash

As per the information provided by the industry that total coal consumption of the unit is 28000 Metric Tons per Day for 1740MW power generation (Including 1200 MW and 540 MW Power plants).

The average ash content in the coal is approx. 40% accordingly 11200 Metric Tons per Day ash will be generated for disposal. The unit has provided following systems for handling of fly ash and bottom ash.

- a) **Bottom ash disposal system:** In order to Environment friendly disposal of bottom ash up to ash pond the unit has installed High Concentration Slurry Disposal (HSCD) system. Installation resulting into reduction in water consumption and increasing the capacity utilization of ash ponds. The unit has installed 04 no. of HSCD in 1200 MW and 02 no. of HSCD in 540 MW Power plant with the capacity of 315m³/Hr and 208m³/Hr respectively.
- b) **High Concentration Slurry Disposal (HSCD):** HSCD system comprises of controlled and monitored feeding system for fly ash & bottom ash followed by a homogenous mixing in an adequately designed Agitator Retention Tank and further pumping to disposal area through the piston diaphragm / hydraulic piston pumps. Conventional lean slurry disposal system and ash water recovery system have some limitations and/ or disadvantages such as huge amount of water wastage, groundwater contamination, potential ash pond collapse, vast land required for ash dykes, higher costs for ash pond construction and higher power consumption. Therefore, unlike of lean system M/s BALCO has adopted HSCD system which has much more advantages above lean slurry system and for its state of art technology.

c) **Fly ash handling system:** The unit has provided Hybrid system consisting of ESP and bag filters for controlling the air pollution from the thermal power plants. The dry fly ash has been collected in 08 No. of Silo's with the capacity of 1000 MT each has been provided for dry ash disposal through bulkers and same is send to cement plant and brick manufacturing unit. The fly ash generation and utilization details for the last 3 year is given below:

Table – IV Fly Ash Utilization Details (Annexure-VII)

Power Plant	2019-20		2020-21		2021-22	
	Generation	Utilization	Generation	Utilization	Generation	Utilization
1200 MW	1,884,373	1,905,694 (101.13%)	2,214,681	2,306,720 (104.16%)	2,139,353	2,826,834 (132.14%)
540 MW	984,636	988,511 (100.39%)	929,897	957,948 103.02%	994,800	1,207,713 (121.40%)
270 MW		Ash not generated as the plant is under temporary shutdown/ suspension from December 2015.				

Note: All the values are in MT.

- It can be analysed from the above that industry is utilising 100 % fly ash from last three financial years.
- However, the industry didn't provide the timeline frame for utilisation of legacy as (in percentage of Annual ash) as per the Fly ash notification dated 31.12.2021 issued by the Ministry of Environment, Forest and Climate Change.
- As per Environmental Clearance issued by the MoEF & CC vide letter no. J-11011/123/2007-IA. II (I) dated 22.04.2022 wherein specific condition xiv. states that “*Legacy ash stocks of 18.2 Million tons shall be liquidated by December 2024. The vehicles carrying as from dyke shall use tarpaulin covers. No additional ash pond shall be developed for ash disposal.*”

d) **Disposal of fly ash in low lying areas:**

The committee has visited the places mentioned in newspaper clippings (petition copy) as well as 14 places out of 23 places. The committee found that in 9 places dumping of approved quantity of fly ash is completed and soil covering has been done. The status of ash disposal in all the 14 low lying areas are summarized in below table.

Table – V. Details of fly ash dumped in Low Lying areas (Annexure-XVIII)

S.No.	Name of industry	Name of Low-Lying Area	Latitude	Longitude	Khasra No. (in Acre/ Hect.)	Permission Letter No. and Date	Permitted Quantity in MT	Present Status
1	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village - Tarda, Tehsil Kartala, dist korba	22.275787	82.734546	Khasra 1093/1, Total Rakba-4.10 Hect.	Ltr.No.-131 dated – 27/05/2020	20,00,000MT	Approved Quantity is dumped & soil covering has been done.
2	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Barbuspur, Tehsil-Korba, Dist-Korba	22.297917	82.71945	Khasra - 118/3, Rakba-1.10 Acre, Kh.No.-225/3, Rakba-320/3, 320/5, 320/8, 322/7 , Rakba-1.46 Acre Total RakbaArea – 2.56 Acre	Ltr.No.-251 dated – 11/06/2020	82,680 MT	Approved Quantity is dumped & soil covering has been done.
3	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Barbuspur, Tehsil-Korba, Dist-Korba	22.297917	82.71945	Khasra – 241/1 , TotalArea – 4.28 Acre	Ltr.No.-655 dated – 02/09/2020	42,000 MT	Approved Quantity is dumped & soil covering has been done.
4	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Barbuspur, Tehsil-Korba, Dist-Korba	22.295752	82.722908	Khasra No.- 69/1, 69/2, 69/3, 81/1, 81/6, 84/1, 84/5, 98/5, 111/1, 111/4, 111/6, 111/7, 115/2, 115/7, 118/7, 124/8, 128, 141, 177, 185/2, 185/5, 185/8, 187/4,	Ltr.No.-1517 dated – 23/02/2021	1,15,000 MT	Approved Quantity is dumped & soil covering has been done.

					224/2/1, 260/1, 265/2, 265/3, 276/1, 276/4, 319/4, 282/2, 282/3 having Rakba - 11.617 Hect. and Rakba-244/1, 244/2, 319/3 Rakba-0.972 Hect. Total Rakba-12.589 Hect..			
5	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Barbuspur, Tehsil-Korba, Dist-Korba	22.29046	82.738513	Khasra No.-184/2, 220/7 and 184/10, Rakba- 0.991 hect, 0.024 hect, 0.441 hect. Total Rakba- 0.756 Hect.	Ltr.No.-01 dated – 01/04/2021	30,000 MT	Approved Quantity is dumped & soil covering has been done.
6	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Barbuspur, Tehsil-Korba, Dist-Korba	22.296334	82.729394	Khasra No.-74/8, 114/3/2, 114/6, 117/8, 169/4, 184/7, 202/3, 314/4, 342/2, 344/6 Total Rakba-3.914 Hect.	Ltr.No.-42 dated – 21/05/2021	1,50,000 MT	Approved Quantity is dumped & soil covering has been done.
7	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Dhongdarha, Tehsil-Kartala Dist-Korba	22.265851	82.835632	Khasra No.-416/1, 417, 419/3, 636/4, Total rakba - 4.569 hect.	Letter.No.-383 dated – 16/08/2021 and Letter No. 790 dated 02/12/2021	5,00,000 MT	Approved Quantity is dumped & soil covering has been done.
8	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Naktikhar Tehsil-Korba, Dist-Korba	22.330232	82.776990	Khasra No.-235, 237/2, 246, 252/2, 245/2, 286, 797/31, 952, 955, 957, 958, 959/2, Total Rakba-4.596 hect.,	Ltr.No.-498 dated – 16/09/2021	90,000 MT	Approved Quantity is dumped & soil covering has been done.
9	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar,	Village – Urga Tehsil-Korba, Dist-Korba	22.260789	82.724249	Khasra No.1194/6, 1194/3, 1112/2, 1112/4, 1194/6, 1193, 1203/1, 1203/2, 1194/7, 1202/2, 1202/3,	Ltr.No.-622 dated – 21/10/2021	3,00,000 MT	Approved Quantity is dumped & soil covering has been done.

	Dist-Korba(C.G.)				1120/2, 1120/3, 1191/1[k, 1191/3, 1206, 1194/2, 1195/1, 1112/3, 1070/17 Total Rakba – 8.87 Acre and Khasra No. 1031, 1102/6 1158/4,1162/1च, 1159/4, 1161/1/d2, 1162/1B, 1162/1च, 1121, 1190/1, 1190/2, 1191/4, 1194/1, 1196/4,1162/1च, 1119/2, 1119/5, 116/7/1, 1167/2, 1070/19,1070/20,1070/21,1070/23, 1070/27,1070/28, 1029/29 Total Rakba- 13.51 ½ Acre. Total Rakba-22.38 Acre.,			
10	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Gram Panchyat – Katbitla, Tehsil-Korba, Dist-Korba	22.249854	82.689097	Khasra No.- 6/1, 38//1 Total rakba- 5.2 Hect.	Ltr.No.-783 dated – 01/12/2021	3,00,000 MT	Approved Quantity is dumped & soil covering has been done.
11	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Kurudih (Barbuspur) Tehsil-Korba, Dist-Korba	22.297127	82.737829	Khasra No. 6/4, 6/5, 6/6, 6/7 Total Rakba- 0.47 Acre	Ltr.No.-1279 dated – 11/03/2022	25,000 MT	Approved Quantity is dumped & soil covering has been done.
12	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Kukricholi (Bhaisma), Naktikhar Tehsil-Korba, Dist-Korba	22.278075	82.746998	Khasra No. 21, 23, 34/1, 34/3, 38,42/4, 43/1,43/2 Rakba 4.963 Hect. And Khasra No. 261/1 Rakba- 2.630 Hect. Total Rakba- 7.593 Hect.	Ltr.No.-62 dated – 22/04/2022	5,00,000 MT	Dumping of fly ash is under process.

13	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Nonbirra Tehsil-Kartala, Dist-Korba	22.261286	82.815404	Khasra No. 667/3 and 680/2d Total Rakba-2.122 Hect	Ltr.No.-88 dated – 11/03/2022	1,00,000 MT	Dumping of fly ash is under process.
14	M/s Lanco Amarkantak Power Ltd, 600 MW TPP, Vill-Patadhi, Dist-Korba(C.G.)	Village – Risda Tehsil-Korba, Dist-Korba	22.382397	82.746415	724/1, 726/1, 726/4, 726/5, 727/4, 727/5, 728 and 729/2, Total Rakba-8.43 Acre	Ltr.No.-1094 dated – 28/01/2022	10,00,000 MT	Dumping of fly ash is under process.

Regional officer, Korba, Chhattisgarh has issued the letter to M/s. BALCO for submitted the compliance on monthly basis as per SOP issued by the CPCB and SPCB (**Annexure -XIX**)

Issue no. 4:Plantation was not carried out as per permission

- i. It has been observed that ample green belt was observed during the field visit. Plantation has been observed around all along the boundary of the plant and inside the plant and town ship area also.
- ii. Plantation work has been just started in the Ash Dyke number 3 and it was informed by the PP that plantation will be started in ash dyke number 1 and 5.
- iii. *“A Report on Monitoring and Evaluation of Plantation” at BALCO by NAV Aastha Jan Vikas Seva Samiti submitted by PP has been analyzed and it was observed that actual plantation was done on 575 acres out of 1973 and it was also stated that as per EC/CTE/CTO condition the targeted plantation has been completed in all units of BALCO, Korba and the survival percentage of plantation done by BALCO, BALCO Nagar, Dist. Korba, Chhattisgarh is about 80.10% which is outstanding performance by the company*
(Annexure-XX)
- iv. However, Industry got expansion for Aluminum Smelter from 5.75 LTPA to 10.85 LTPA for which Environmental Clearance was issued by the MoEF & CC vide letter no. J-11011/123/2007-IA. II (I) dated 22.04.2022 wherein specific condition xxi. States that *“Three tier Green Belt shall be developed in a time frame of one year covering 33% of total area with native species all among the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt*

developed shall be monitored on periodic basis to ensure that damaged plants area replaced with new plants in the subsequent years GB action plan is given as below (Annexure -XXI)

S. No.	Details	Total area (In ha)	Existing Plantation Area (In ha)	On-Going Plantation Area (in ha)	Action Plan: Green Cover Proposed up to			Total Green cover- (in ha)	Total Green cover - (%)	Species Proposed
					FY 22	FY 23	FY 24			
1.	Integrated Aluminum Smelter	383.63	97.72	0.81	5.0	5.85	17.40	126.8	33%	Karanj, Neem, Pipal, Sal, Sarai, Arjun, Sagori, Banyan, Sisoo,Rain tree, Gulmohar, Mahua,Badam etc
2.	Ash Dyke	151.75	8.87	-	6	10	9.24	34.11		
3.	Township land	263.04	126.49	6.84	2	2	2	139.33		
4.	Balance other land	301.49	20.94	7.12	10	10	15	63.06		
	Total Area	1099.91	254.02	14.77	23	27.85	43.64	363.28		

Action Taken:

1. The constitution of district level Fly ash committee for district Korba has been completed and an order also issued in this regard on dated 07.06.2022 (Annexure-XXII)

Conclusions:

- a) The joint committee individually has visited the red mud ponds area on 1st June 2022 and on 2nd June, 2022 along with applicant and it has been observed that red mud ponds are converted to Ash dyke, no excavation of red mud area has been observed and areas/locations where the red mud is being dumped illegally by the industry was not found.
- b) The ground water monitoring results of basic parameters are well within the acceptable limit as per the BIS standard.

- c) As far as Fluoride contamination is concerned, all the samples are within the acceptable limits of BIS, i.e. below 1.5 mg/lit.
- d) The agriculture department has informed that due to no complaint about soil degradation, the department has not carried out any such study.
- e) The reports obtained from the CMHO, Korba Chhattisgarh is not in line with the issues raised by the applicant in the petition.
- f) The ambient air quality parameters monitored at all monitoring locations were found within the NAAQS. The concentration of primary gaseous pollutants i.e. PM₁₀, PM_{2.5}, SO₂& NO_x were found within the limit.
- g) The SO₂ concentrations in stacks of 1200 MW power plant and 540 MW power plant has exceeds the prescribed limits 600 mg/Nm³.
- h) The industry is utilising 100 % fly ash from last three financial years.
- i) The industry didn't provide the timeline frame for utilisation of legacy ash (in percentage of Annual ash) as per the Fly ash notification dated 31.12.2021 issued by the Ministry of Environment, Forest and Climate Change.
- j) It has been observed that ample green belt was observed during the field visit. Plantation has been observed around all along the boundary of the plant and inside the plant and town ship area also. However, as per EC condition 33% green belt shall be developed by the industry by F.Y 2023-24 as committed.

Recommendations:

- As committed by the Project authorities to undertake take plantation in 363.27 Ha by F.Y 2024 as per EC condition and the compliance status shall be submitted on quarterly basis to respective authorities.
- Legacy ash stock 18.2 million tons shall be liquidated by December, 2024 for which the district level Fly Ash committee may take the time frame line and execution plan of the same.

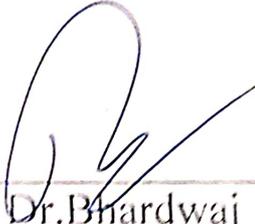
- To install more number of piezometers around the fly ash dykes to check the ground water quality.
- As the major emissions are fluoride from the pot room roof, the sampling frequency should be increased, and sampling is done at multiple locations.

				
Ankur Sahu, Regional Officer, CECB, Korba (C.G.)	Rakesh Dewangan, Scientist “ B” Central Ground Water Board, Raipur	Dr.Bhardwaj Adiraju, Sci “C” IRO, MoEF& CC Raipur	P. Jagan, Regional Director, CPCB,Bhopal	Smt. Ranu Sahu, Collector Korba, District- Korba

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Photographs taken during the visit of M/a Balco and Korba Area



Figure 1 Red mud pond/Ash dyke visit



Figure 2 place visited as informed by the applicant



Figure 3 Ash dyke visit with applicant



Figure 4 Plantation in reclaim ash dyke area



Figure 5 SLF leachate collection



Figure 6 View of SLF No. 2



Figure 7 Balco FTP Stack



Figure 8 Fly ash filling in low lying area at village-Dong dharha



Figure 9 Fly ash filling in low lying area at village- Barbaspur

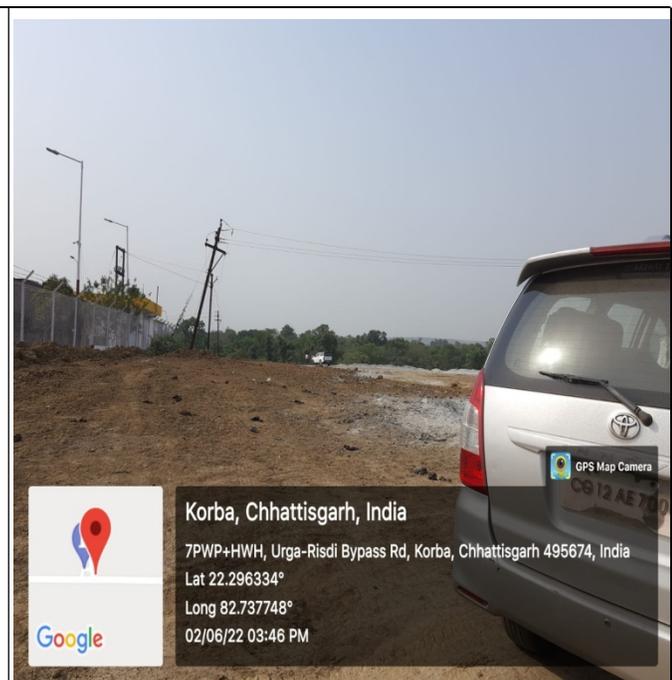


Figure 10 Fly ash filling in low lying area at village- Barbaspur near petrol pump.



Figure 11 Fly ash filling in low lying area at village- Risda.



Figure 12 Fly ash filling in low lying area at village- Tarda.



Figure 13 Water sample collection Dengurnallha down stream, Balco nagar Korba.



Figure 14 Ground Water sample collection at village- Rogbahari, Balco nagar korba

**Minutes of meeting to implement the order passed by
Hon'ble NGT O.A. No. 188/2022 on dtd 20/04/2022.**

As per order of Hon'ble National Green Tribunal principal bench New Delhi O.A. No. 188/2022 dtd. 20-04-2022. Dr Anil Kumar Singh V/s Chhattisgarh State. The first meeting of committee has been conducted through video conferencing on 18-05-2022 at 11:00 AM. The following committee members have attended the meeting :-

1. Smt. Ranu Sahu, Collector Korba, District-Korba(C.G.)
2. Shri. P. Jagan, Regional Director, Central Pollution Control Board Bhopal(M.P.)
3. Dr.Bhardwaj Adiraju, Scientist "C" Integrated Regional Office Raipur, Ministry of Environment, Forest and Climate change Govt. of India.
4. Shri Rajnikanta Sharma, Scientist "B" Central Ground water Board, Raipur (C.G.)
5. Shri. Ankur Sahu, Regional Officer, Chhattisgarh Environment Conservation Board, Korba (C.G.)

The following issues were discussed in the meeting :-

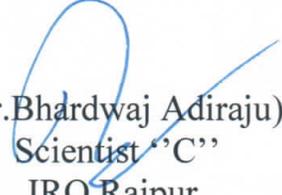
1. Regional Officer, Chhattisgarh Environment Conservation Board Korba (C.G.) shall collect the concerned preliminary information from Balco management.
2. Monitoring work will be done by collecting water samples in and around Redmud Pond (at present ash dyke) on the day of inspection. It has also decided by the committee to collect water samples in and around the Balco area.
3. The analysis of fluoride and heavy metal will be done by collecting water samples from piezometric holes setup all around the SLF.
4. It is proposed to inspect the Fly Ash dumped by Balco management in the low lying areas.
5. The last 6 months data of NAMP and CAAQMS station under Regional Office Korba (C.G.) should be collected.
6. If any report or health data is available in relation to pollution born diseases in Balco and area adjacent to Balco, it should be obtained from the CMHO, Korba.

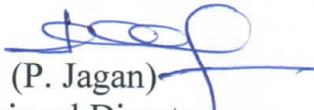
7. Inspection of possible effected sites will be done by the committee from 01-06-2022 to 03-06-2022.
8. The orders issued earlier by the Court in similar cases may also be referred in recommendation of the committee if any.

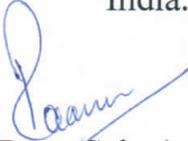
Meeting ended with vote of Thanks.


(Ankur Sahu)
Regional Officer,
CECB, Korba (C.G.)

(Rajnikanta Sharma)
Scientist 'B'
CGWB, Raipur (C.G.)


(Dr. Bhardwaj Adiraju)
Scientist 'C'
IRO Raipur,
MoEF and CCGovt. of
India.


(P. Jagan)
Reginoal Director,
CPCB, Bhopal(M.P.)


(Smt. Ranu Sahu)
Collector,
District-Korba(C.G.)



क्षेत्रीय कार्यालय
छत्तीसगढ़ पर्यावरण संरक्षण मण्डल
तहसील कार्यालय के पास, रामपुर, कोरबा, जिला-कोरबा (छ.ग.) 495677
ई. मेल-rocecbkorba@gmail.com

क्रमांक 204 /क्षे.का./छ.ग.प.सं.मं./2022

कोरबा दिनांक 26/05/2022

प्रति,

डॉ. अनिल कुमार,
प्रांत संयोजक,
गुरु गोविंद सिंह नगर,
पंडरी रायपुर (छ.ग.) 492001
मो.नं. 78387-19125.

विषय:- माननीय नेशनल ग्रीन ट्रिब्यूनल प्रिंसिपल बेंच, नई दिल्ली में विचाराधीन प्रकरण ओ.ए. क्रमांक 188/2022 (पी.बी.) के संबंध में अपना पक्ष रखने बाबत।

- संदर्भ:- 1. माननीय एन.जी.टी.ओ.ए. क्रमांक 188/2022 (पी.बी.) में पारित आदेश दिनांक 20/04/2022.
2. समिति की बैठक दिनांक 18/05/2022.

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उपरोक्त संदर्भित विषयांतर्गत लेख है कि माननीय नेशनल ग्रीन ट्रिब्यूनल प्रिंसिपल बेंच, नई दिल्ली में विचाराधीन प्रकरण ओ.ए.क्रमांक 188/2022 (पी.बी.) के संबंध में संयुक्त समिति द्वारा दिनांक 18/05/2022 को बैठक आयोजित की गई थी। बैठक में लिए गए निर्णय अनुसार समिति द्वारा स्थल निरीक्षण दिनांक 01, 02, एवं 03 जून को किया जाना है। अतः आप अपना पक्ष या सुझाव रखने हेतु उक्त तिथि पर इस कार्यालय या कलेक्टर कोरबा के सभाकक्ष में समय सुबह 11:00 बजे उपस्थित होकर प्रस्तुत कर सकते हैं।

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Handwritten signature
क्षेत्रीय अधिकारी,
छ.ग. पर्यावरण संरक्षण मंडल, कोरबा

BRIEF DESCRIPTION OF ALUMINA MANUFACTURING PROCESS

High-pressure digestion technology is adopted for the production of Alumina. A brief description of the process along with flow sheet is given below: -

The Plant consists of the following main establishments: -

- Crushing and Grinding Section
- Slurry storage & Desilication
- Slurry Preheating & Digestion Section
- Dilution, Settling & Washing Section
- Red Mud Filtration & Causticization Section
- Aluminate Liquor Cooling & Spent Liquor Thickening Section.
- Precipitation & Hydrate Filtration Section
- Evaporation & Salt Removal Section
- Calcination, Raw Material & Lime Slaking Unit

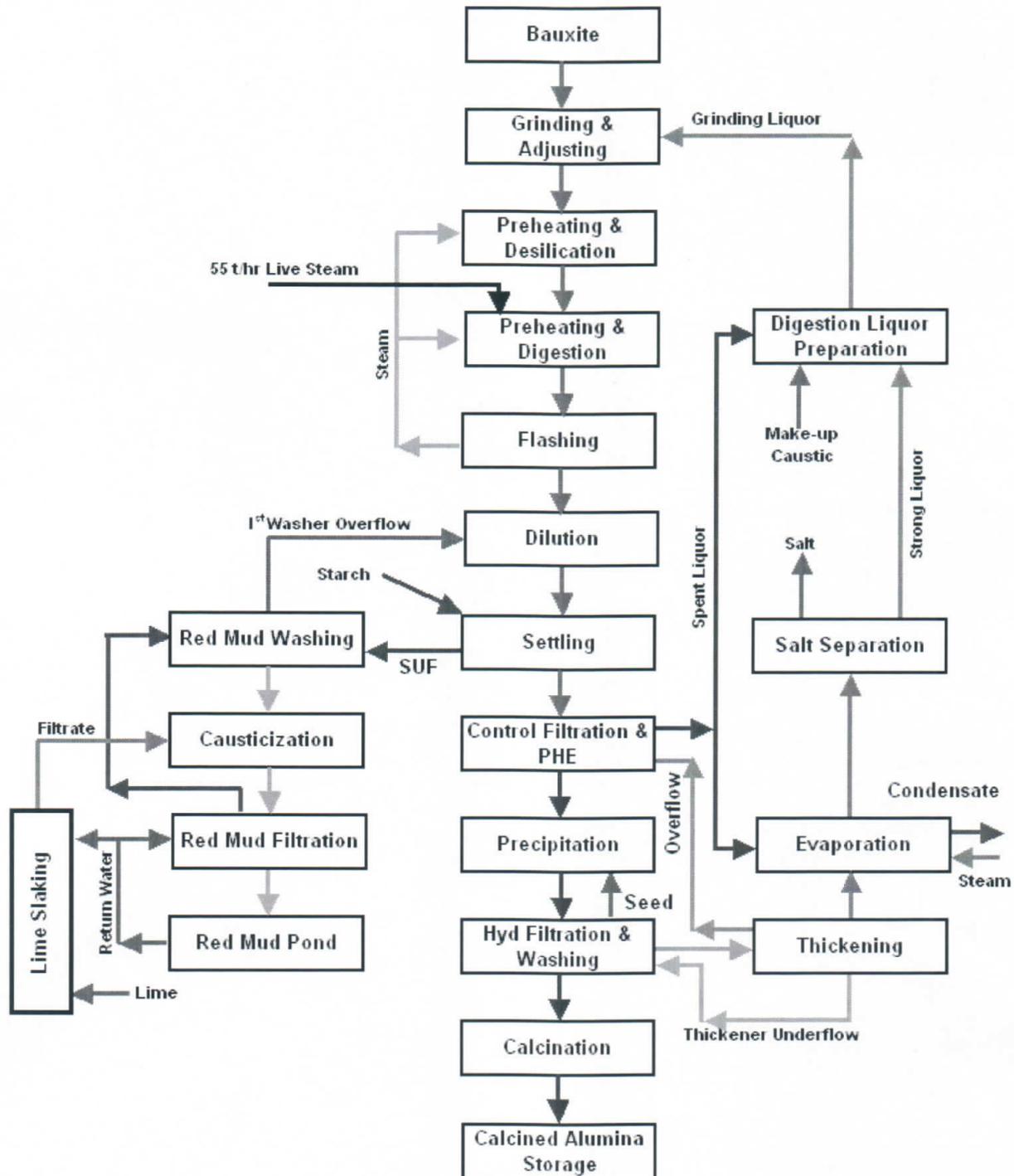
The Bauxite received from mines is stored in the open bauxite yard. It is blended and crushed to 0-40 mm. size in two crushers. The crushed bauxite is then conveyed to Ball Mill section where the bauxite along with the recycled caustic soda solution called digestion liquor is ground. The slurry after grinding is stored in tanks and pumped to Desilication units through low-pressure pre-heaters where the flashed steam of 6th and 7th flash tanks is used for heating the slurry. The de-silicated slurry is then pumped by means of slurry piston pumps to digesters through pre-heaters (called H.P. heaters). The flashed steam generated from 4th and 5th flash tanks is used for heating the slurry. The initial three digesters of the digestion line are heated by means of flashed steam generated by 1st, 2nd and 3rd flash tanks. Live steam at 68-70 kg/cm² pressures is charged in any of the two digesters between 4th & 6th digesters. The blow-off slurry after last flash tank is taken to dilution tanks where first washer over flow is mixed. The diluted slurry is pumped to settlers where sedimentation of red mud takes place. Starch/Flocculant is used in these settlers as settling aid for faster sedimentation of the mud. The under-flow mud (called Red Mud) is subsequently washed counter currently in 4 washers to recover the leachable soda to maximum extent possible, then the underflow mud is filtered in two stages the unfiltered mud is re-pulped with pond water and pumped to Red Mud Pond. The filtrate from red mud filters is used for counter current washing of mud in washers.

The clear supernatant liquor (called aluminate liquor) is filtered in Kelly filters coated with lime and passed through plate heat exchangers where, it is cooled by spent liquor generated from hydrate filtration. The cooled aluminate liquor is then mixed with hydrate seed from seed filters and pumped to precipitation unit. In precipitation unit (16 tanks are provided for precipitation). The precipitation of the hydrate takes place and the slurry from last precipitation tank is pumped to hydrate filters. Product hydrate is filtered in product filter where hot evaporation alkaline condensate is used for washing the product. The product hydrate is then stored in hydrate godown.

A part of the same precipitated slurry is sent to seed filter (5 drum type and 2 disc type). The seed from these filters is mixed with aluminates liquor and pumped to first precipitators. The filtrate, which is, spent caustic liquor after thickening in hydrate thickeners is sent to digestion liquor preparation section and evaporation section.

The product hydrate is fed to kiln where it is calcined at a temperature of 1200°C. The Calcined alumina is stored in silo for onward transportation to smelter plant by means of tankers. (Fuel oil is used in the kilns for calcining the alumina hydrate).

PROCESS FLOW SHEET - ALUMINA PRODUCTION





BHARAT ALUMINIUM COMPANY LIMITED

P. O. Balco Nagar, Korba (C.G.), INDIA Pin - 495 684

Phone : (07759) 242005, 242001 Fax : (07759) 242169

No. Kb/Safety /2013/ 112

Dated 23 /9 /2013

To,
The Member Secretary
Chhattisgarh Environment Conservation Board,
Government of Chhattisgarh
Raipur (CG)

Respected Sir

Sub: Alumina Plant Dismantling Intimation

With reference to our Alumina Plant, Factory license Bearing No. Lic.No. 5220/5220/ B-2 /KRB / 2m(i) Operations of alumina plant are under suspension since 24th sept-09. This plant was constructed in order to produce flourey alumina suitable for Soderberg Technology. Since our Smelter plant is dismantled due to Environmental & Economic reasons and technically flourey Alumina is not suitable for point feed technology, therefore it is proposed to dismantle our Alumina plant.

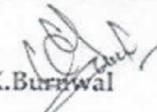
For the past 3 years we were exploring the viability of revamping our Alumina plant for our pre-baked technology producing Aluminium Smelter. But considering the technical limitations, presently we are not able to revamp the plant due to a concern in the technology and the structures.

In view of above, we are hereby informing that dismantling of Alumina plant is being carried out from 1/11/2013. And also once again we are reaffirming that all the employees currently engaged in Alumina plant are gainfully employed in other departments of Balco.

Thanking you,

Yours faithfully

For BHARAT ALUMINIUM COMPANY LIMITED


K. Barnwal
Factory Manager
Alumina Plant



K. N. Barnwal
Head FLA
Bharat Aluminium Co. Ltd.
KORBA (C. G.)

As directed copy to you
for n.a. pl.

TO: 22256451350

P: 1

→ GIM (Smt) / N. Thind

29/6/04

BY SPEED POST

No. J-13011/3/2003.1A-II(T)
Government of India/ Bharat sarkar
Ministry of Environment & Forests
(Paryavaras Aur Van Mantralaya)

Paryavaran Bhawan,
CGO Complex, Lodi road,
New Delhi-110003
Dated: 23rd June, 2004

To _____

The President,
Bharat Aluminium Company Ltd.,
II Floor, Core-6,
Scope Office Complex,
7-Lodi Road, New Delhi-110003.

Subject: 675 MW Coal Based Captive Power Plant, Korba, Chhattisgarh of M/s
Bharat Aluminium Company Ltd - Environmental clearance reg

Sub:

- The undersigned is directed to refer to your communications No. BALCO/ENV/03/A-19/40 dated 21.2.2003, 23.4.03, 24.5.03 & 12.2.04 on the above mentioned subject.
- The proposal is regarding setting up 675 MW Captive Power Plant in the premises of existing plant area. No additional land is required. No forest land is involved. No ecologically sensitive area is involved. Coal requirement will be 10800 TPD. Ash & Sulphur content in the coal is 40% and 0.3-0.5 % respectively. Fly ash generation will be 3840 TPD in dry form and 5486 TPD in wet form. Bottom ash will be 480 TPD dry and 686 TPD wet form. Ash utilisation is reported in Bricks, Cement, Road Construction, Landfill, Soil embankment, Mine stowing & ash ponds. Water requirement will be 51240 m³/day and will be met from Hasdeo Barrage on river Hasdeo. Public hearing was held on 27.9.2002 and NOC was issued by Chhattisgarh Environment Conservation Board on 17.2.2003. Capital cost of the project is Rs. 2000.00 Crores which includes Rs 100.00 crores for environmental protection measures.
 - The environmental clearance for the above project is hereby accorded subject to implementation of following terms and conditions:

-2-

- i) All the conditions stipulated by Chhattisgarh Environment Conservation Board vide their letter no. 580/TS/CECB/2002 dated 17.2.2003 should be strictly implemented.
- ii) No additional land shall be acquired.
- iii) Coal requirement is estimated at 10800 TPD having calorific value of 3000-3675 K.Cal/kg with 40% ash content and 0.3-0.5% sulphur content. Copy of coal linkage approval should be submitted to the Ministry within three months.
- iv) A single flue stack of 275 m height shall be provided with continuous online monitoring equipment.
- v) High efficiency Electrostatic Precipitator (ESP) should be installed to limit outlet SPM emission 75 mg/Nm³.
- vi) Space provision should be made for Flue Gas De-sulphurisation (FGD) unit.
- vii) Ash generation will be 9326 TPD fly ash and 1166 TPD bottom ash. Ash disposal would be done through high concentration slurry disposal system on abandoned red mud pond. Fly ash utilisation plan should be submitted to the Ministry within three months. Ash generated should be used in a phased manner as per provisions of the notification on Fly Ash Utilisation issued by the Ministry in September, 1999 and its subsequent amendments. By the end of 9th year full fly ash utilisation should be ensured.
- ix) Necessary drainage network at the proposed CPP site should be developed.
- x) Water requirement should not exceed 51240 m³/day. No ground water and/or other surface water should be used. Copy of confirmed water withdrawal should be submitted to the Ministry within three months.
- xi) Waste water of coal handling plant should be treated before disposal.
- xii) Appropriate water harvesting technology should be finalised in consultation with Central Ground Water Authority/Board, within a period of two months from the date of issue of the clearance letter.
- xiii) Regular monitoring of water quality including heavy metals should be undertaken around ash disposal and the project area to ascertain change in the water quality, if any, due to leaching of contaminants from ash disposal area.

- xiv). Study on fluoride concentration in foliage, analysis of ground water and storm water runoff from the existing CPP site drains should be carried out regularly.
- xv). Noise level should be limited to 75 Leq and regular maintenance of equipment be undertaken. For people working in the area of generator and other high noise area, earplug should be provided.
- xvi). A greenbelt should be developed around the power plant periphery and ash pond area, covering an area of 75 acres. Tree density of 1500-2000 trees per ha should be maintained. Greenbelt development plan should be submitted to the Ministry.
- xvii). Regular monitoring of the air quality should be carried out in and around the power plant and records be maintained. Periodic six monthly reports should be submitted to this Ministry.
- xviii). For controlling fugitive dust, regular sprinkling of water in vulnerable areas of the plant should be ensured.
- xix). Recommendations of the Chhatisgarh State Bio-diversity Strategy and Action Plan(CBSAP) be implemented and the conservation plan for likely habitat of migratory Elephants from Orissa be prepared in consultation with State Wildlife Deptt.
- xx). All other mitigative measures shall be taken as enumerated in Chapter 3 of the EIA report.
- xxi). The project proponent should advertise at least in two local newspapers widely circulated in the region around the project, one of which should be in the vernacular language of the locality concerned, informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at <http://www.mef.nic.in>.
- xxii). A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.
- xxiii). Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards should be submitted to this Ministry/ Regional Office/CPCB/SPCB.
- xxiv). Regional Office of the Ministry of Environment & Forests located at Bhopal will monitor the implementation of the stipulated conditions. Complete set of Environmental Impact Assessment Report and Environment Management Plan should be forwarded to the Regional Office for their use during monitoring.

- xxv). Separate funds should be allocated for implementation of environmental protection measures alongwith item-wise break-up. These cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.
- xxvi). Full cooperation should be extended to the Scientists/Officers from the Ministry/Regional Office of the Ministry at Bhopal /the CPCB/the SPCB who would be monitoring the compliance of environmental status.

4. The Ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry.
5. The environmental clearance accorded shall be valid for a period of 5 years for construction/operation of the power plant. In case , if the project authorities fails to do so within this stipulated period, this environmental clearance shall stand lapsed automatically.
6. In case of any deviation or alteration in the project proposed from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.
7. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the Public Liability Insurance Act, 1991 and its amendments, the Environment Impact Assessment Notification of January, 1994 and its amendments.


(S. BHOWMIK)
ADDITIONAL DIRECTOR

Copy to:

1. Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.

-5-

2. Secretary, Department of Environment, Dau Kalyan Singh Bhawan, Raipur-492001
3. Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. Chairman, Chhattisgarh Environment Conservation Board, Narak Niwas, Civil Lines, Raipur-492001 with respect to display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's office for 30 days.
5. Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
6. Chief Coservator of Forests, Regional Office (WR), MOEF, Kendriya Paryavaran Bhawan, Link Road No.3B Ravi Shankar Marg, Bhopal-462016
7. Director(EI), MOEF
8. Guard file.
9. Monitoring file.


(S.BHOWMIK)
ADDITIONAL DIRECTOR

BY SPEED POST

No.J-13011/16/2007-IA.II(T)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan
CGO Complex, Lodi Road
New Delhi-110 003

Dated: 14th August, 2007

To

M/s Bharat Aluminium Co. Ltd
Aluminium Sadan, Core-6
Scope Complex
7- Lodi Road, New Delhi- 110 003

**Sub: 1200 MW coal based TPP at Korba, Chhattisgarh by M/s BALCO Ltd
– Environmental Clearance regarding.**

Sir,

The undersigned is directed to refer to your communication no. Kb/Power/1200 MW/2006/15 dated 27.03.2007 regarding the subject mentioned above. Subsequent information furnished vide letter no. Kb/Power/1200 MW/2007/19 dated 14.06.2007 have also been considered.

2. The proposal is for grant of environmental clearance under EIA Notification, 1994 for setting up of a 1200 MW coal based thermal power plant in village Risda at Korba, Chhattisgarh. The land requirement is estimated as 355 acres. The coal requirement is estimated as 19600 TPD, which will be obtained from South Eastern Coalfields Ltd. through MGR system. Water requirement is estimated as 3100 m³/hr, which will be obtained from Hasedeo river. COC of 5 shall be adopted. Ash will be disposed in abandoned red mud ponds using high concentration slurry disposal system. No forestland is involved. No ecologically sensitive area such as National Park and Wildlife Sanctuary is within 10 Km radius from the plant boundary. Public hearing was held on 7th March, 2007. Total cost of the project is Rs 4810.00 crores which includes Rs 125.00 crores for environmental protection measures.

3. The proposal has been considered in accordance with para 12 of the EIA Notification dated 14th September, 2006 read with sub clause (i) (a) of clause 2.2.1 of sub para 2.2 of para 2.0 of the Circular No. J-11013/41/2006 – IA.II (I) dated 13th

October, 2006. Based on the recommendations of the Expert Appraisal Committee for Thermal Power and Coal Mine Projects, the Ministry of Environment & Forests hereby accords environmental clearance to the said project under the provisions of EIA Notification 2006, subject to implementation of the following terms and conditions:-

- (i) The total land requirement shall not exceed 355 acres for all the activities/facilities of the power project.
- (ii) Ash and sulphur contents in the coal to be used as fuel shall not exceed 42% and 0.5% respectively.
- (iii) A bi-flue stack of 275 m height shall be provided with continuous online monitoring equipments.
- (iv) High efficiency Electrostatic Precipitator (ESP) with efficiency not less than 99.9 % shall be installed so as to ensure that particulate emissions do not exceed 50 mg/Nm³.
- (v) Space provision shall be made for Flue Gas De-sulphurisation (FGD) unit of requisite efficiency of removal of SO₂, if required at a later stage.
- (vi) Low NOx burners shall be installed.
- (vii) Closed Circuit Cooling system with cycle of concentration (COC) of 5 shall be provided.
- (viii) For controlling fugitive dust, regular sprinkling of water in the coal handling area and other vulnerable areas of the plant shall be ensured.
- (ix) The project authorities should adhere to the provisions stipulated in the fly ash notification of September, 1999 and as amended in August, 2003 in regard to fly ash utilization.
- (x) The unutilized fly ash and bottom ash shall be disposed in the form of High Concentration Slurry in the abandoned red mud ponds. The ash pond shall be lined with impervious lining to avoid any leaching into groundwater. The ash dyke shall be so designed and strengthened to ensure guard against breaching. Adequate safety measures shall also be taken so that pond ash does not become air borne to cause air pollution in the surrounding areas.
- (x) Rain water harvesting should be adopted. Central Groundwater Authority / Board shall be consulted for finalization of appropriate rain water harvesting structure within a period of three months from the date of clearance.
- (xi) The study on reuse of 1920 m³/day of discharge water shall be completed early latest within three months and submitted to MoEF. Based on the same, any

additional safeguard measures required shall be implemented in the project. Zero discharge shall be adopted.

- (xii) Regular monitoring of ground water quality including heavy metals shall be undertaken around ash dyke and the project area to ascertain the change, if any, in the water quality due to leaching of contaminants from ash disposal area.
- (xiii) A greenbelt shall be developed all along the plant and ash pond boundary covering a total area of 1/3 of total project area.
- (xiv) First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- (xv) Leq of Noise level should be limited to 75 dBA and regular maintenance of equipment be undertaken. For people working in the high noise areas, personal protection devices should be provided.
- (xvi) Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records maintained. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Quarterly reports shall be submitted to the Regional Office of this Ministry.
- (xvii) The project proponent should advertise within seven days of issue of environmental clearance, in at least two local newspapers widely circulated in the region around the project, one of which should be in the vernacular language of the locality concerned, informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board/Committee and may also be seen in the Website of the Ministry of Environment and Forests in the <http://envfor.nic.in>.
- (xviii) A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.
- (xix) Half yearly report on the status of implementation of the conditions and environmental safeguards should be submitted to this Ministry, the Regional Office, CPCB and SPCB.
- (xx) Regional Office of the Ministry of Environment & Forests located at Bhopal will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report, Environment Management Plan and the additional information / clarifications submitted subsequently should be forwarded to the Regional Office for their use during monitoring.

- (xxi) Separate funds should be allocated for implementation of environmental protection measures along with item-wise break-up. These cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.
- (xxii) Full cooperation should be extended to the Scientists/Officers from the Ministry and its Regional Office at Bhopal / the CPCB / the SPCB during monitoring of the project.
4. The Ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry.
 5. The environmental clearance accorded shall be valid for a period of 5 years to the start of production operations by the power plant.
 6. In case of any deviation or alteration in the project proposed from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.
 7. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.


 (Dr. S.K. AGGARWAL)
 Director

Copy to:-

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi - 110 001.
2. The Secretary, Department of Environment, Govt. of Chhattisgarh, Dau Kalyan Singh Bhawan, Raipur-492001.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110 066.

4. The Chairman, Chhattisgarh Environment Conservation Board, Nanak Niwas, Civil Lines, Raipur-492001 - with a request to display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's office for 30 days.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110 032.
6. The Chief Conservator of Forests, Central Regional Office, Ministry of Environment & Forests, E-3/240, Arera Colony, Bhopal-462 016.
7. Director (EI), MOEF.
8. Guard file.
9. Monitoring file.


(Dr. S.K. AGGARWAL)
Director



J-13011/16/2007 - IA. II (T)
Government of India
Ministry of Environment & Forests

Tel no: 011- 24367257
e-mail: w.bharat@nic.in
Paryavaran Bhavan, C.G.O. Complex,
Lodi Road, New Delhi -110003.
Dated: 27.04.2011

OFFICE ORDER

Sub: Change in configuration from 2x600 MW to 4x300 MW Coal Based Thermal Power Plant at village Risda, in Korba Distt., in Chhattisgarh - reg.

Sir,

This has reference to your letter no. TPP-1200/Envnt/A-01/10/353, dated 12.11.2010 requesting for amendment in the environmental clearance accorded by this Ministry vide its letter of even no. dated 14.08.2007.

2. The request has been examined and the following changes as mentioned under shall be made in this Ministry's letter of even no. dated 14.08.2007.

- a) After the figure 1200 MW mentioned in the subject matter and at para no.2, second line, the configuration 4x300 MW shall be inserted.
- b) Under para no.3, clause no. (iii) read as 'A bi-flue stack of 275 m height shall be provided with continuous online monitoring equipments' shall now be substituted by the following:

'Two bi-flue stacks of 275 m height each shall be provided with continuous online monitoring equipments for SO_x, NO_x and PM_{2.5} & PM₁₀. Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack may also monitored on periodic basis'

- c) After clause no. (xxii), under para no.3, the following shall be added:

(xxiii) The project proponent shall upload the status of compliance of the conditions stipulated in the environmental clearance issued vide this Ministry's letter of even no. dated 14.08.2007, in its website and updated periodically and also simultaneously send the same by e-mail to the Regional Office of the Ministry of Environment and Forests.

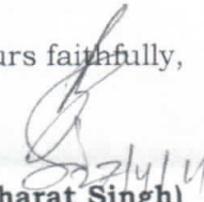
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xxiv) Criteria pollutants levels including NO_x, RSPM (PM₁₀ & PM_{2.5}), SO_x (from stack & ambient air) shall be regularly monitored and results displayed in your website and also at the main gate of the power plant.

7. All other conditions mentioned in this Ministry's aforesaid letter of even no. 14.08.2007 shall remain the same.

This issues with the approval of the Competent Authority.

Yours faithfully,


(W. Bharat Singh)
Deputy Director

M/s Bharat Aluminium Company Ltd.
Aluminium Sadan, Core-6
SCOPE Office Complex
Lodhi Road
New Delhi - 110 003.

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Secretary (Environment), Environment Department, Government of Chhattisgarh, Raipur.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, State Environment Conservation Board, Nanak Niwas, Civil Lines, Raipur, Chhattisgarh - 421 001
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi- 110032.
6. The Chief Conservator of Forests, Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan, Arera Colony, Ravishankar Nagar, Bhopal - 462016.
7. The District Collector, Korba District, Chhattisgarh.
8. Guard file.
9. Monitoring File.


(W. Bharat Singh)
Deputy Director

J-13011/16/2007-IA. II (T)
Government of India
Ministry of Environment, Forests and Climate Change

3rd Floor, Vayu Block,
Indira Paryavaran Bhawan, Jor Bagh Road,
Aliganj, New Delhi-110003

Date:- 18.09.2014

To

M/s Bharat Aluminium Company Ltd.
Aluminium Sadan, Core-6
SCOPE Office Complex
Lodhi Road
New Delhi - 110 003.

Sub: 1200 MW (4x300) Coal Based Thermal Power Plant by M/s. BALCO Ltd. at Village Risda, in Korba Distt., in Chhattisgarh -reg. Extension of validity of environmental clearance.

Sir,

This has reference to your letters dated 14.07.2012 and 10.08.2012 on the above subject. It is noted that EC was accorded by MoEF for 1200 (2x600) MW on 14.08.2007 and subsequent amendment dated 27.04.2011 for change in project configuration from 2x600 to 4x300 MW.

2. The matter was placed before the EAC (Thermal Power) in its 54th Meeting held during August 6-7, 2012. In acceptance of the recommendation of the EAC and in view of the information/clarification furnished by you with respect to the above mentioned power project and the information / clarifications provided by the MoEF, Regional Office and CECB, the validity of said EC and its subsequent amendment is extended for a period of five years i.e. till 13.08.2017 to start the production operations by the power plant.

3. Further, under Para no.3 of the said EC dated 14.08.2007 and its amendment dated 27.04.2011 after the condition no. (xxiv), the following conditions shall be added:

(xxv) *The action plan formulated for Korba Region by CECB / CPCB shall be complied.*

(xxvi) Harnessing solar power within the premises of the plant particularly at available roof tops shall be undertaken and status of implementation shall be submitted periodically to the Regional Office of the Ministry.

(xxvii) A long term study on radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.

(xxviii) Mercury emissions from stack shall also be monitored on periodic basis.

- (xxix) No ground water shall be extracted for use in operation of the power plant even in lean season. No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/ operation of the power plant.
- (xxx) Minimum required environmental flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/ Rivers (as applicable) even in lean season.
- (xxxii) Fly ash shall not be used for agricultural purpose. No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.
- (xxxiii) Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary.
- (xxxiiii) Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.
- (xxxv) The environment statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.
- (xxxvi) CSR schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programmes.
- (xxxvii) The project proponent shall also adequately contribute in the development of the neighbouring villages. Special package with implementation schedule for free potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.
- (xxxviii) For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final.

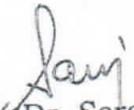
(xxxviii) An Environmental Cell comprising of at least one expert in environmental science/ engineering, ecology, occupational health and social science, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.

(xxxix) The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.

4. All other conditions mentioned in this Ministry's letter of even no. dated 14.08.2007 and its amendment dated 27.04.2011 shall remain the same.

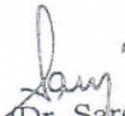
5. This issues with the approval of the Competent Authority.

Yours faithfully,


(Dr. Saroj)
Scientist 'F'

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Secretary (Environment), Environment Department, Government of Chhattisgarh, Raipur.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, State Environment Conservation Board, Nanak Niwas, Civil Lines, Raipur, Chhattisgarh - 421 001
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi- 110032.
6. The Chief Conservator of Forests, Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan, Arera Colony, Ravishankar Nagar, Bhopal - 462016.
7. The District Collector, Korba District, Chhattisgarh.
8. Guard file.
9. Monitoring File.


(Dr. Saroj)
Scientist 'F'



CHHATTISGARH ENVIRONMENT CONSERVATION BOARD
1-Tilak Nagar, Shiv Mandir Chowk, Main Road,
Awanti Vihar, Raipur (C.G.) 492 006

No. 4132/TS/CECB/2011

Raipur, dated: 14/102011

To,

✓ Vice President - Projects
 M/s Bharat Aluminium Company Limited,
 P.O. – Balco Nagar
Korba (C.G.)

Sub: No Objection Certificate for height raising of the abandoned red mud pond no. – 4 from 305 meters to 310 meters for disposal of ash generated from 1200 MW Power Plant based on Coal.

Ref: Your application letter no. Nil dated: 06/04/2011.

--: 00 :--

Please refer to above mentioned letter. After examining the proposal and considering the case on the basis of merits, the Board has no objection on height raising of the abandoned red mud pond no. – 4 from 305 meters to 310 meters for disposal of ash generated from 1200 MW Power Plant based on Coal by M/s Bharat Aluminium Company Limited Ltd., Balco Nagar, District - Korba (C.G.), subject to the following terms and conditions: -

Terms & Conditions: -

1. The height of abandoned red mud pond no. – 4 located at Parsabhata, Korba shall be limited to R.L. 310 meters as per the proposal submitted along with the application.
2. Industry shall strictly adhere to the design, scope of work, construction sequence, technical specifications, field quality plan and ash fills activity submitted to the Board vide above mentioned letter.
3. Industry shall ensure proper strengthening of pond in scientific manner with sound and proven engineering practices to ensure stability of ash fills.
4. The technical report and the measures outlined by the industry are to be vetted by the National Technical Institutes like IIT or NIT and shall be submitted to the Board before the proposed works are taken up. After completion of the work, the compliance of the works proposed and done be again vetted by the same institute and shall be submitted to the Board. The ash loading shall be allowed subject to the recommendation of the institute and the Regional Officer, Korba.

sw

5. Adequate and suitable drainage arrangement, filter media, rock toe and rock toe drain shall be provided for proper drainage of seepage and rain water. All necessary arrangements shall be made by the industry to ensure the water outlets to be treated to the standards prescribed by the Board and the treated water shall be utilized/recycled for their end uses.
6. Industry shall ensure that the ash pond overflow water quality conforms to the standards prescribed by the Board.
7. Industry shall ensure that there shall not be any breach or damage to the ash dyke, which may result in Environmental Hazards in the near by areas.
8. Industry shall make all necessary arrangements to prevent fugitive emissions of pond ash in the surrounding areas.
9. Industry shall have to abide by the guidelines of the Central Government/State Government regarding fly ash utilization issued from time to time. Industry shall ensure compliance of Ministry of Environment and Forests Notification dated: 14/09/1999 (as amended till date) regarding use of fly ash.
10. Industry shall obtain the required statutory clearances/licenses from concerned Central/State Government Departments, Boards, Bodies and Corporations etc. before start of raising activities. Industry shall also obtain the permission of District Magistrate, Korba for the raising of above ash dyke.
11. Industry shall follow direction issued by Central/State Government, Central Pollution Control Board/Chhattisgarh Environment Conservation Board from time to time regarding control of water & air pollution and environmental conservation.
12. The management of the plant shall be fully liable for all damages caused to the environment in case of any mishap or accident occurring due to the pond ash filling in the proposed area.
13. The industry shall submit the progress report of the work being done on a regular basis (monthly) to the Regional Office, Korba & the Head Office.
14. No deviation of the plan submitted by the industry regarding the ash fill area will be allowed and it shall conform to the technical details, actions and measures as envisaged and incorporated in the plan.
15. The Board reserves the right to alter, modify or impose new and stricter conditions at any time and it shall be binding and compulsory for the industry to follow the same.
16. Regular and continuous monitoring of the work shall be done by the industry specially regarding the safety aspects of the ash filling and shall take all adequate and necessary steps deemed fit and ensure the compliance of all the technical aspects.
17. The issuance of this NOC does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Central, State or local laws or regulations.



This "**No Objection Certificate**" is being issued only for height raising of the abandoned red mud pond no. - 4 from 305 meters to 310 meters for disposal of ash generated from the 1200 MW power plant based on coal. This shall not be treated as consent under Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981.

For & on behalf of
Chhattisgarh Environment Conservation Board

Purkay
14/11/11
Member Secretary

Chhattisgarh Environment Conservation Board
Raipur (C.G.)

Endt. No. /TS/CECB/2011
Copy to: -

Raipur, dated: ___/___/2011

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

Member Secretary

Chhattisgarh Environment Conservation Board
Raipur (C.G.)

Purkay



CHHATTISGARH ENVIRONMENT CONSERVATION BOARD
1-Tilak Nagar, Shiv Mandir Chowk, Main Road,
Avanti Vihar, Raipur (C.G.) 492 006

No. 6483 ITS/CECB/2012

Raipur, dated: 25/1/2012

To,

✓ Vice President - Projects
M/s Bharat Aluminium Company Limited,
P.O. – Balco Nagar
Korba (C.G.)

Sub: No Objection Certificate for height raising of the abandoned red mud pond no. – 4, 5 & 6 (310 meters to 314 meters) for disposal of ash generated from 1200 MW Power Plant based on Coal.

Ref: Your application letter dated: 06/04/2011 and subsequent correspondent ending letter dated 17/12/2011.

--:: OO ::--

Please refer to above mentioned letters. After examining the proposal and considering the case on the basis of merits, the Board has no objection on height raising of the abandoned red mud pond no. – 4, 5 & 6 (310 meters to 314 meters) for disposal of ash generated from 1200 MW Power Plant based on Coal by M/s Bharat Aluminium Company Limited Ltd., Balco Nagar, District - Korba (C.G.), subject to the following terms and conditions: -

Terms & Conditions: -

1. The height of abandoned red mud pond no. – 4, 5 & 6 located at Parsabhata, Korba shall be limited to R.L. 314 meters as per the proposal submitted along with the application.
2. Industry shall strictly adhere to the design, scope of work, construction sequence, technical specifications, field quality plan and ash fills activity submitted to the Board.
3. The technical report and the measures outlined by the industry are to be vetted by the National Technical Institutes like IIT or NIT and shall be submitted to the Board before the proposed works are taken up. After completion of the work, the compliance of the works proposed and done be again vetted by the same institute and shall be submitted to the Board. The ash loading shall be allowed subject to the recommendation of the institute and the Regional Officer, Korba.

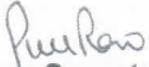
Ant

4. Industry shall obtain the required statutory clearances/licenses from concerned Central/State Government Departments, Boards, Bodies and Corporations etc. before start of raising activities.
5. Industry shall obtain the permission of District Magistrate, Korba for the raising of above ash dyke.
6. Adequate and suitable drainage arrangement, filter media, rock toe and rock toe drain shall be provided for proper drainage of seepage and rain water. All necessary arrangements shall be made by the industry to ensure the water outlets to be treated to the standards prescribed by the Board and the treated water shall be utilized/recycled for their end uses.
7. Industry shall ensure that the ash pond overflow water quality conforms to the standards prescribed by the Board.
8. Industry shall ensure proper running and maintenance all the time and shall ensure that there shall not be any breach or damage to the ash dyke, which may result in Environmental Hazards in the near by areas.
9. Industry shall make all necessary arrangements to prevent fugitive emissions of pond ash in the surrounding areas.
10. Industry shall prepare Risk Assessment and Disaster Management Plan for the proposed project and submit the same within 01 month from the date of issue of this letter.
11. The management of the plant shall be fully liable for all damages caused to the environment in case of any mishap or accident occurring due to the pond ash filling in the proposed area.
12. The industry shall submit the progress report of the work being done on a regular basis (monthly) to the Regional Office, Korba & the Head Office.
13. No deviation of the plan submitted by the industry regarding the ash fill area will be allowed and it shall conform to the technical details, actions and measures as envisaged and incorporated in the plan.
14. The Board reserves the right to alter, modify or impose new and stricter conditions at any time and it shall be binding and compulsory for the industry to follow the same.
15. Regular and continuous monitoring of the work shall be done by the industry especially regarding the safety aspects of this fill area & ash filling and shall take all adequate and necessary steps deemed fit and ensure the compliance of all the technical aspects.
16. The issuance of this NOC does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Central, State or local laws or regulations.

mt

This "**No Objection Certificate**" is being issued only for height raising of the abandoned red mud pond no. – 4, 5 & 6 (310 meters to 314 meters) for disposal of ash generated from 1200 MW Power Plant based on coal. This shall not be treated as consent under Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981.

For & on behalf of
Chhattisgarh Environment Conservation Board


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

Endt. No.
Copy to: -

/TS/CECB/2012

Raipur, dated: ___/___/2012

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


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

भारतसरकार
जलधक्तिमंत्रालय
केन्द्रीय भूमिजलबोर्ड
उत्तर मध्य छत्तीसगढ़ क्षेत्र द्वितीय
तल, एल.के. कार्पोरेट एवं
लॉजिस्टिकपार्क, धमतरीरोड़
झुमरतराई, रायपुर-49200
फोन-077112974406
फैक्स-07712974405



Govt. of India
Ministry Jal Shakti
Central Ground Water Board,
North Central Chhattisgarh Region,
2nd Floor, L.K. Corporates & Logistic Park,
Dhamtari Road, Dumartarai
Raipur-492001
Phone-0771-2974406
Fax-0771-2974405

Chemical Analysis Report

CGWB/NCCR/Chemical Lab / File No. 05 - 1819

17 JUN 2022

Table - 1 Chemical analysis result of basic parameters in water samples collected from Korba area.

S.NO.	District	Location	Lat	Long	Source	Date of collection	PH	EC(μ S/cm)	CO ₃	HCO ₃	Cl	NO ₃	SO ₄	F	TH	Ca	Mg	Na	K	SiO ₂	Po ₄
1	Korba	Village-Parasbathia	22.4	82.74	Hand Pump	01/06/2022	6.91	557	0	291	17.5	0	12.68	0.28	135	40	8.4	75	1.2	11.2	0
2	Korba	Village-Rongbhari	22.4	82.74	Hand Pump	01/06/2022	7.42	430	0	86.8	42	70.4	24.91	0.15	150	32	17	38	3.8	8.4	0
3	Korba	Belgairialha up stream	22.4	82.76	Nalla	01/06/2022	7.03	112	0	43.4	10.5	0	7.07	0.01	50	14	3.6	2.7	5.7	3.4	0
4	Korba	Of basic parameters	22.4	82.71	Nalla	01/06/2022	7.64	311	0	118	17.5	1.36	46.64	0.39	100	24	9.6	34	6.1	5.6	0
5	Korba	Dengurnalhadown stream	22.4	82.73	Nalla	01/06/2022	6.79	173	0	55.8	17.5	0.96	20.25	1.09	60	16	4.8	11	7.6	4.2	0
6	Korba	Lalghat	22.4	82.75	Hand Pump	01/06/2022	6.77	227	0	118	17.5	6.35	6.78	0.02	100	30	6	11	1.7	3.41	0
7	Korba	Dengurnalhaup stream	22.4	82.75	Nalla	01/06/2022	7.04	116	0	49.6	10.5	0.2	13.81	0.1	45	8	6	4.1	8.1	3.21	0
8	Korba	Village-Salihahatha	22.3	82.78	Hand Pump	02/06/2022	7.21	238	0	93	21	25.6	5.54	0.29	95	32	3.6	8.8	4.3	2.21	0
9	Korba	Village-Bhaisma	22.3	82.78	Hand Pump	02/06/2022	7.14	1076	0	298	91	49.8	65.17	0.56	315	42	50	99	7.2	12.1	0
10	Korba	Village-Kukrichohi	22.3	82.75	Hand Pump	02/06/2022	6.87	1496	0	409	151	21	94.68	0.02	325	64	40	179	9.6	15.2	0
11	Korba	Down stream near Unga Village, K.korba	22.3	82.73	Hasdeo River	02/06/2022	7.21	193	0	80.6	10.5	2.41	26.19	0.23	80	20	7.2	7.9	3.5	2.23	0
12	Korba	Village-Naktikhar	22.3	82.77	Hand Pump	02/06/2022	7.05	143	0	74.4	10.5	0	5.57	0.05	75	22	4.8	1.6	4.5	4.6	0
13	Korba	Village-Risdi	22.4	82.76	Hand	03/06/2022	7.62	244	0	49.6	24.5	27.4	17.03	0.08	55	18	2.4	2.3	8	2.3	0

12	Korba	Village-Naktikhar	22.343	82.7726	Hand Pump	02/06/2022	4.951	0.005	0	0	0	0
13	Korba	Village-Risdi	22.367	82.7623	Hand Pump	03/06/2022	1.035	0.369	0	0	0	0
14	Korba	Rampur Korba	22.368	82.7466	Borewell	03/06/2022	0	0.135	0	0	0	0
15	Korba	Village-Dader	22.341	82.7441	Hand Pump	03/06/2022	0.161	0.356	0	0	0	0
16	Korba	Village-Khamora	22.355	82.7484	Borewell	03/06/2022	0.126	0.044	0	0	0	0
17	Korba	Village-Dumardih	22.407	82.7892	Hand Pump	03/06/2022	2.014	0.057	0	0	0	0
18	Korba	Village-Risda	22.391	82.7544	Hand Pump	03/06/2022	0	0.538	0	0	0	0

Checked By

Rakesh Dewangan
16/6/22

Rakesh Dewangan
Scientist-B

Dr. P. K. Naik
16-06-22

Dr. P. K. Naik
Regional Director

Analyzed By

Dr. Anita Bind
16/06/2022

Dr. Anita Bind
STA (Chemical)

Regional Director
Central Ground Water Board
North Central Chhattisgarh Region, Raipur

कार्यालय उप संचालक कृषि जिला-कोरबा (छ.ग.)

क्र./टी-3/SHC/2022-23/1664

कोरबा, दिनांक 03/06/2022

प्रति,

क्षेत्रीय अधिकारी,
छ.ग. पर्यावरण संरक्षण मंडल, कोरबा

विषय:- माननीय नेशनल ग्रीन ट्रिब्यूनल प्रिंसिपल बेंच नई दिल्ली द्वारा (ओ.ए. क्रमांक 188/2022 में) पारित आदेश दिनांक 20.04.2022 डॉ अनिल कुमार सिंह विरुद्ध छत्तीसगढ़ राज्य के तहत गठित समिति द्वारा चाही गई जानकारी उपलब्ध कराने बाबत।

संदर्भ:- क्षेत्रीय कार्यालय छत्तीसगढ़ पर्यावरण संरक्षण मंडल तहसील कार्यालय के पास रामपुर कोरबा जिला - कोरबा (छ.ग.) का पत्र क्र./178/क्षे.का./छ.ग.प.सं.मं./2022 कोरबा दिनांक 13.05.2022

उपरोक्त संदर्भित विषयांतर्गत लेख है कि माननीय नेशनल ग्रीन ट्रिब्यूनल प्रिंसिपल बेंच, नई दिल्ली द्वारा (ओ.ए. क्रमांक 188/2022 में) पारित आदेश दिनांक 20.04.2022 डॉ. अनिल कुमार सिंह विरुद्ध छत्तीसगढ़ राज्य के तहत गठित समिति द्वारा कोरबा शहर एवं संलग्न क्षेत्र में मृदा एवं मृदा निम्नीकरण के संबंध में किसी भी प्रकार की कोई शिकायत प्राप्त न होने के कारण इस विषय पर कोई अध्ययन नहीं किया गया। सूचनार्थ सम्प्रेषित।

उप संचालक कृषि
जिला-कोरबा (छ.ग.)

कोरबा, दिनांक 3/06/2022

पृ.क्र./टी-3/SHC/2022-23/1665

प्रतिलिपि:-

1. संभागीय संयुक्त संचालक कृषि बिलासपुर की ओर सादर सूचनार्थ सम्प्रेषित।

उप संचालक कृषि
जिला-कोरबा (छ.ग.)



SC
Asaly
06/06/2022

JS
06/06/22

कार्यालय मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी ANNEXURE -IX
जिला कोरबा (छ.ग.)

क्र./आईडीएसपी/2022/ 6440

कोरबा दिनांक :-03-06-2022

प्रति,

कलेक्टर
जिला कोरबा (छ.ग.)

विषय :- माननीय नेशनल ग्रीन ट्रिब्यूनल प्रिंसिपल बेंच, नई दिल्ली द्वारा (ओ.ए.क्रमांक 188/2022 में) पारित आदेश दिनांक 20/04/2022 डॉ. अनिल कुमार सिंह विरुद्ध छत्तीसगढ़ राज्य के तहत गठित समिति द्वारा चाही गई जानकारी उपलब्ध कराने बाबत।

संदर्भ :- क्षेत्रीय अधिकारी, छ.ग. पर्यावरण संरक्षण मंडल का कार्यालयीन पत्र क्रमांक/179/क्षे.का./छ.ग.प. सं.मं./2022 कोरबा, दिनांक - 23.05.2022

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उपरोक्त संदर्भित विषयांतर्गत लेख है कि माननीय नेशनल ग्रीन ट्रिब्यूनल प्रिंसिपल बेंच, नई दिल्ली द्वारा (ओ.ए. क्रमांक 188/2022 में) पारित आदेश दिनांक 20/04/2022 डॉ. अनिल कुमार सिंह विरुद्ध छत्तीसगढ़ राज्य के तहत गठित समिति द्वारा बालको एवं बालको से संलग्न क्षेत्र में प्रदूषण जनित बीमारियों के संबंध में यदि कोई रिपोर्ट या स्वास्थ्य संबंधी आंकड़े हो तो उसे इस कार्यालय से प्राप्त किये जाने हेतु निर्देशित किया गया है।

तत्संबंध में जानकारी संलग्न कर आपकी ओर सादर प्रेषित है।

संलग्न :- उपरोक्तानुसार

मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी
जिला कोरबा (छ.ग.)

कोरबा दिनांक :-03-06-2022

पु.क्र./आईडीएसपी/2022/ 6441

प्रतिलिपि :-

✓ क्षेत्रीय अधिकारी, छ.ग. पर्यावरण संरक्षण मंडल, तहसील कार्यालय के पास, रामपुर कोरबा, जिला कोरबा (छ.ग.) की ओर सूचनार्थ।

मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी
जिला कोरबा (छ.ग.)



Jr.Sc
Aadhy
06/06/2022

As per HMIS Block wise COPD Information - District Korba

Yearly (2021-22)

Indicator	DH	Kartala	Katghora	Korba	Pali	PODIUP ARODA	Urban	Total
Inpatient - Asthma, Chronic Obstructive Pulmonary Disease (COPD), Respiratory infections	225	59	12	1	56	68	115	536

Month April 2022

Indicator	DH	Kartala	Katghora	Korba	Pali	PODIUP ARODA	Urban	Total
Inpatient - Asthma, Chronic Obstructive Pulmonary Disease (COPD), Respiratory infections	25	1	2	0	1	4	0	33

BALCO AREA

As per information given by ANM & Mitanin

Indicator	Balco Area
Inpatient - Asthma, Chronic Obstructive Pulmonary Disease (COPD), Respiratory infections	38


 Chief Medical Officer,
 KORBA (C. G.)



**REGIONAL OFFICE
C.G. ENVIRONMENT CONSERVATION BOARD,
KORBA [C.G.]**

Name of Place -M/s Bharat Aluminum Company Limited, Balco Nagar Korba	
Date of Monitoring – 02-06-2022	Monitoring done by Shri Raju kumar Bareth (J.L.A) Shri Laxmi Vaishnav (J.L.A.) Shri Pradeep Kumar Rathore (J.L.A.)
Date of Analysis 03-06-2022	

A) STACK EMISSION MONITORING

S.No	Source	Particulate Matter (mg/Nm ³)	Remarks
-	-	-	-
-	-	-	-

B) AMBIENT AIR QUALITY MONITORING

S.No	Location	RSPM (PM 10) (µg/m ³)	PM 2.5 (µg /m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
01	Village- Rogbahari, Balco Korba.	67.33	48.22	15.86	17.60
02	Parsabhata Balco Nagar Korba.	88.15	43.10	18.00	19.40
03	GET Hostel, Balco Nagar Korba.	93.66	47.15	17.65	18.50
04	Lalghat Balco Nagar Korba.	84.10	41.09	18.61	19.00
Prescribed Limits		100	60	80	80

- Remarks
- 1- Indicate exceeding the Prescribed Limits.
 - 2- During Monitoring the weather was Normal / Cloudy / Rainy.
 - 3- Prevailing wind direction was from NE to SW.

[Signature]
I/Chemist

[Signature]
Jr. Scientist

[Signature]
Scientist

[Signature]
Regional Officer

Real Time Data Acquisition And Monitoring

Site Name: Bharat Aluminium Company Ltd

Report: Custom Report

From Date: 2022/06/01 00:00:00 To Date : 2022/06/03 12:57:29

Description	AAQMS1-PM10 - (ug/m3) Raw	AAQMS1-PM2.5 - (ug/m3) Raw	AAQMS1-NO - (ug/m3) Raw	AAQMS1-SO2 - (ug/m3) Raw
Prescribed Standards	0 - 100	0 - 60	0 - 80	0 - 80
Maximum Data	70.31	64.64	12.36	22.17
Minimum Data	64.3	20.44	9.63	21.19
Geometric Mean	66.44	36.63	11.27	21.83
Median	64.7	24.81	11.82	22.12
Standard Deviation	3.36	24.36	1.45	0.55
Maximum Value At Time	2022-06-03	2022-06-02	2022-06-03	2022-06-02
Minimum Value At Time	2022-06-02	2022-06-01	2022-06-02	2022-06-01
Valid Data Points	3	3	3	3
Total Data Points	3	3	3	3
Data Availability %	100.0%	100.0%	100.0%	100.0%

SI No	Time	AAQMS1-PM10 - (ug/m3) Raw	AAQMS1-PM2.5 - (ug/m3) Raw	AAQMS1-NO - (ug/m3) Raw	AAQMS1-SO2 - (ug/m3) Raw
1	2022-06-01	64.70	20.44	11.82	21.19
2	2022-06-02	64.30	64.64	9.63	22.17
3	2022-06-03	70.31	24.81	12.36	22.12

Report Details: BACL | 2022-06-18 13:03:48 | Custom Report

BALCO/ENV/A-06(C)/2022/137

Date: 4th June 2022

To,
The Regional Officer
Chhattisgarh Environment Conservation Board
Near Tehsil Office Korba
KORBA - 495 677

Sub: Information on status of stacks for the date 03.06.2022
Ref : Our telephonic discussion dated 03rd June 2022.

Dear Sir,

With reference to the above and as per our telephonic discussion dated 3rd June 2022 during monitoring of power plants stacks by your team, we would like to submit that, we have total 24 stacks with the facility of CEMS and also manual monitoring of all the 24 stacks being done regularly and monthly reports being submitted to your good office. Details of 24 stacks is as under:

- Potline-1 (Smelter 2.7 LTPA) – 4 FTP Stacks (FTP-1, FTP-2, FTP-3 & FTP-4)
- Potline-2 (Smelter 3.25 LTPA) – 2 FTP Stacks (FTP-1 & FTP-2)
- Green Anode Plant (GAP) – 1 - 4 Stacks (D-6, D-7, D-8 & D-9)
- Green Anode Plant (GAP) – 2 - 4 Stacks (D-6, D-7, D-8 & D-9)
- Bake Oven Plant – 1 - 1 FTP Stack
- Bake Oven Plant – 2 - 1 FTP Stack
- Power plant 540 MW - 4 Stacks (Unit-1, Unit-2, Unit-3 & Unit-4)
- Power plant 1200 MW - 4 Stacks (Unit-1, Unit-2, Unit-3 & Unit-4)

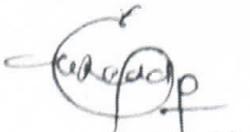
However, during conducting of stack monitoring by your team, out of above 24 Stacks, 4 stacks were not in operation on 03.06.2022 reason for the same is as under:

- 540 MW Power Plant – Unit # 1 – Shutdown due to recent coal shortage issue.
- 540 MW Power Plant – Unit # 2 – Shutdown due to recent coal shortage issue.
- 1200 MW Power Plant – Unit # 2 – shut down due to recent coal shortage issue.
- 1200 MW Power plant – Unit # 4 – Shut down due to overhauling activity of unit.

Trust the above is in line with your requirements.

Thanking you,

Yours faithfully,


G Venkat Reddy
COO-Power



REGIONAL OFFICE
C.G. ENVIRONMENT CONSERVATION BOARD,
KORBA [C.G.]

Name of Place – M/s Bharat Aluminum Company Limited Balco Nagar Korba (4x135=540 MW)	
Date of Monitoring – 04-06-2022	Monitoring done by B.P.Mishra, I/Chemist
Date of Analysis 04-06-2022	

A) STACK EMISSION MONITORING

S.No.	Source	PM (mg/Nm ³)	NOx (mg/Nm ³)	SO ₂ (mg/Nm ³)
01.	Unit #1 ESP outlet duct	Shut down		
02.	Unit #2 ESP outlet duct	Shut down		
03.	Unit #3 ESP outlet duct	22.19	215	1024
04.	Unit #4 ESP outlet duct	18.27	275	1124
Prescribed Limits		50.00	450	600

B) AMBIENT AIR QUALITY MONITORING

S.No.	Location	RSPM (µg/m ³)	SPM (µg/m ³)		
01		—	-		
02		—	-		
03		-	-		
04		-	-		

- Remarks 1- Indicate exceeding the Prescribed Limits.
2- During Monitoring the weather was Normal / Cloudy / Rainy.
3- Prevailing wind direction was from .

B.P.Mishra
I/Chemist

[Signature]
Jr. Scientist

[Signature]
Scientist

[Signature]
REGIONAL OFFICER



**REGIONAL OFFICE
C.G. ENVIRONMENT CONSERVATION BOARD,
KORBA [C.G.]**

Name of Place – M/s Bharat Aluminum Company Limited Balco Nagar Korba (4x300=1200 MW)	
Date of Monitoring – 04-06-2022	Monitoring done by B.P.Mishra, I/Chemist
Date of Analysis 04-06-2022	

A) STACK EMISSION MONITORING

S.No.	Source	PM (mg/Nm ³)	NOx (mg/Nm ³)	SO ₂ (mg/Nm ³)
01.	Unit #1 ESP outlet duct	16.18	170	980
02.	Unit #2 ESP outlet duct	Shut down.		
03.	Unit #3 ESP outlet duct	22.32	205	1040
04.	Unit #4 ESP outlet duct	Shut down		
Prescribed Limits		50.00	450	600

B) AMBIENT AIR QUALITY MONITORING

S.No.	Location	RSPM (µg/m ³)	SPM (µg/m ³)		
01		—	-		
02		-	-		
03		-	-		
04		-	-		

- Remarks 1- Indicate exceeding the Prescribed Limits.
2- During Monitoring the weather was Normal / Cloudy / Rainy.
3- Prevailing wind direction was from .

B.P. Mishra
I/Chemist

Sanjay
Jr. Scientist

Sanjay
Scientist

Asah
REGIONAL OFFICER



LOGO



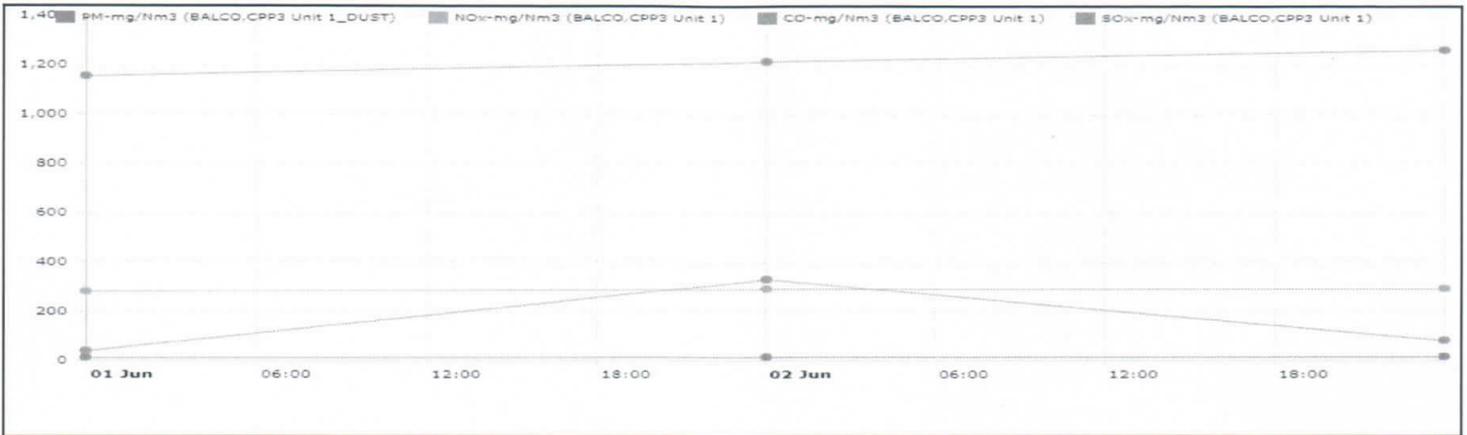
Forbes Marshall Multi Station Report

From : 01-06-2022 00:00:00

To : 03-06-2022 12:41:00

Interval : Daily

Function : Average



Flag legends: < - Average with less data, C - Calibration mode, M - Maintenance mode, S - Data under scrutiny, B - Bad data, H - High permissible limit crossed, L - Low permissible limit crossed, P - Processed Data, V - Corrected Data, D - Delayed Data, R - Analyzer drift

Calender	PM Avg	NOx Avg	CO Avg	SOx Avg		
Plant	BALCO	BALCO	BALCO	BALCO		
Station	CPP3 Unit 3_DUST	CPP3 Unit 3	CPP3 Unit 3	CPP3 Unit 3		
Units Range	mg/Nm3	mg/Nm3	mg/Nm3	mg/Nm3		
01-06-2022 00:00:00	27.14 M	163.85 MC	29.98 MC	919.10 MC		
02-06-2022 00:00:00	23.46	162.55 MC	16.40 MC	953.94 MC		
03-06-2022 00:00:00	23.92 <	156.50 < MC	59.15 < MC	1048.93 < MC		

Report Summary

Average	24.84	160.97	35.17	973.99		
Maximum	27.14	163.85	59.15	1048.93		
Minimum	23.46	156.50	16.40	919.10		
Std.Deviation	2.00	3.92	21.84	67.20		
Geom.Mean	24.79	160.93	30.75	972.47		
Median	23.92	162.55	29.98	953.94		
Mode	27.14	156.50	16.40	919.10		
Total Active Duration						

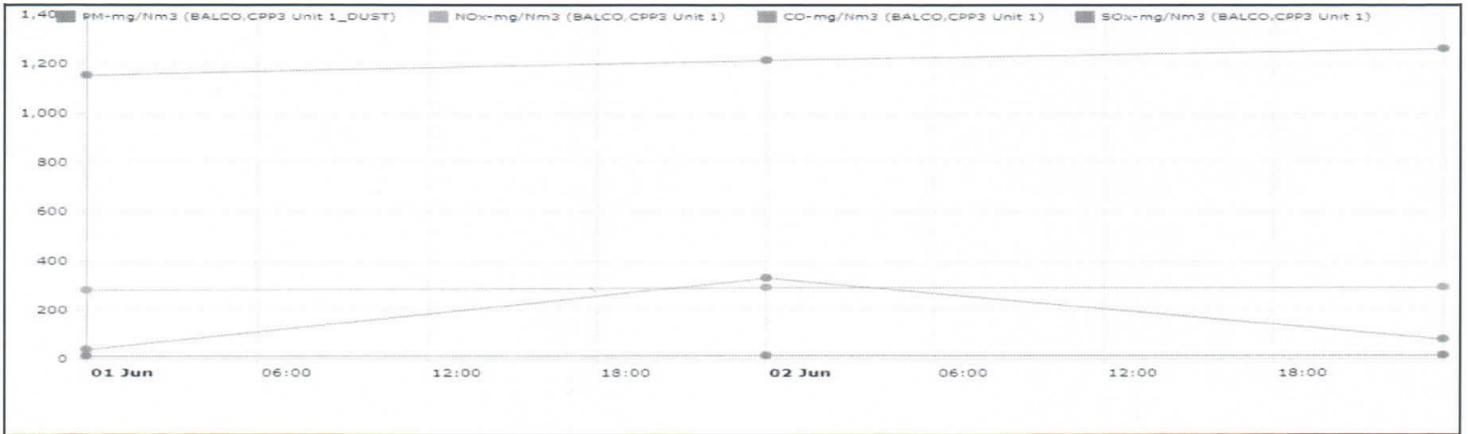
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Calender	PM Avg	NOx Avg	CO Avg	SOx Avg		
Plant Station	BALCO CPP3 Unit 3_DUST	BALCO CPP3 Unit 3	BALCO CPP3 Unit 3	BALCO CPP3 Unit 3		
Units Range	mg/Nm3	mg/Nm3	mg/Nm3	mg/Nm3		
01-06-2022 00:00:00	27.14 M	163.85 MC	29.98 MC	919.10 MC		
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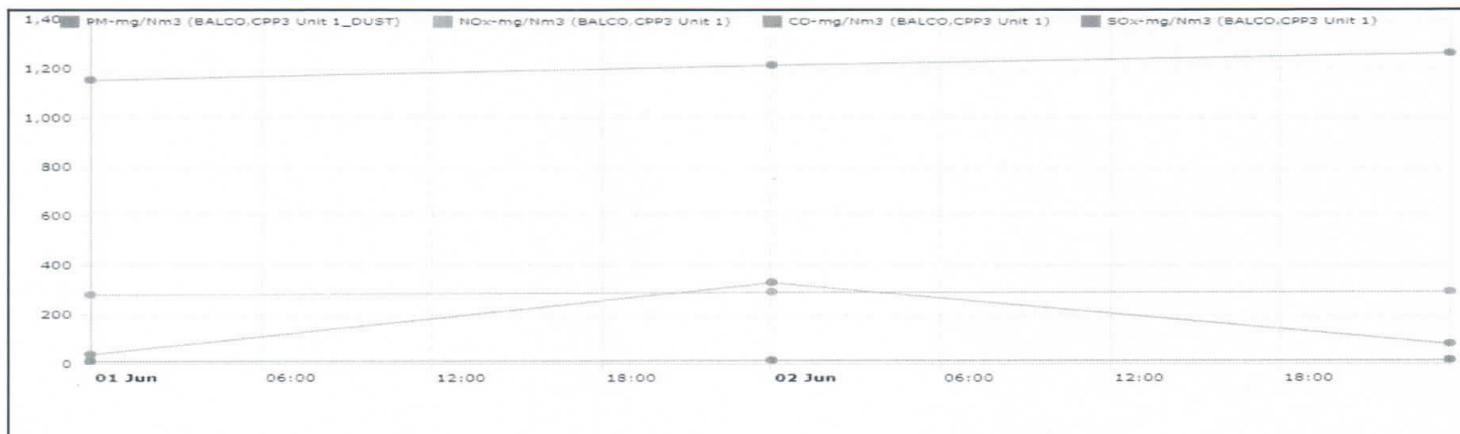
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Calender	PM Avg	NOx Avg	CO Avg	SOx Avg		
Plant	BALCO	BALCO	BALCO	BALCO		
Station	CPP3 Unit 3_DUST	CPP3 Unit 3	CPP3 Unit 3	CPP3 Unit 3		
Units	mg/Nm3	mg/Nm3	mg/Nm3	mg/Nm3		
Range						
01-06-2022 00:00:00	27.14 M	163.85 MC	29.98 MC	919.10 MC		
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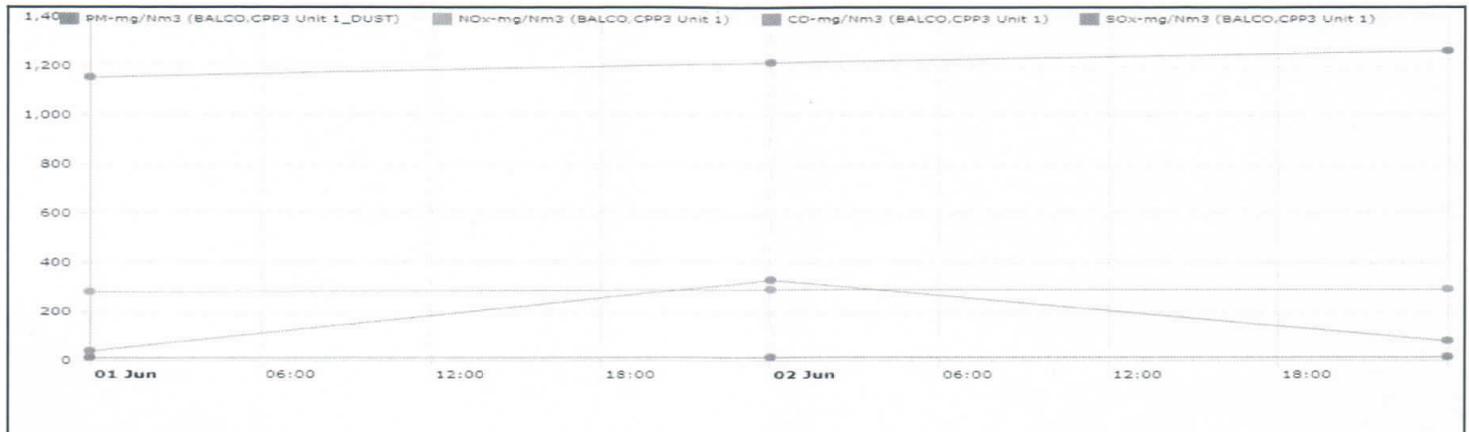
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Station	CPP3 Unit 3_DUST	CPP3 Unit 3	CPP3 Unit 3	CPP3 Unit 3		
Units	mg/Nm3	mg/Nm3	mg/Nm3	mg/Nm3		
Range						
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भारत का राजपत्र

The Gazette of India

सी.जी.-डी.एल.-अ.-01042021-226335
CG-DL-E-01042021-226335

असाधारण
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (i)
PART II—Section 3—Sub-section (i)

प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

सं. 192]

नई दिल्ली, बृहस्पतिवार, अप्रैल 1, 2021/चैत्र 11, 1943

No. 192]

NEW DELHI, THURSDAY, APRIL 1, 2021/CHAITRA 11, 1943

पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 31 मार्च, 2021

सा.का.नि. 243(अ).—केन्द्रीय सरकार, पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3, धारा 6 और धारा 25 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, पर्यावरण (संरक्षण) नियम, 1986 का और संशोधन करने के लिए निम्नलिखित नियम बनाती है, अर्थात् :-

1. (1) इन नियमों का संक्षिप्त नाम पर्यावरण (संरक्षण) संशोधन नियम, 2021 है।

(2) ये नियम राजपत्र में प्रकाशन की तारीख को प्रवृत्त होंगे।

2. पर्यावरण (संरक्षण) नियम, 1986 की अनुसूची-1, के क्रम संख्यांक 25 में, “*टीपीपी (इकाईयां) इस अधिसूचना के प्रकाशन की तारीख से दो वर्ष के भीतर सीमाओं को पूरा करेंगी”, अक्षरों, कोष्ठकों और शब्दों के स्थान पर, निम्नलिखित रखा जाएगा, अर्थात् :-

“(i) पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, विद्युत मंत्रालय, केन्द्रीय विद्युत प्राधिकरण (सीईए) और केन्द्रीय प्रदूषण नियंत्रण बोर्ड के प्रतिनिधियों से मिलकर बने कार्य बल का गठन केन्द्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) द्वारा सारणी-1 में यथाविनिर्दिष्ट तीन प्रवर्गों में सारणी-1 के स्तंभ (4) में यथाविनिर्दिष्ट समय सीमा के भीतर उत्सर्जन मानदंडों के अनुरूप होने के लिए उनकी अवस्थिति के आधार पर तापीय विद्युत संयंत्रों के प्रवर्गीकरण हेतु किया जाएगा, अर्थात् :-

सारणी-1

क्र.सं.	प्रवर्ग	अवस्थिति/स्थान	अनुपालन के लिए समय सीमाएं	
			निवृत्त नहीं होने वाली इकाईयां	निवृत्त होने वाली इकाईयां
(1)	(2)	(3)	(4)	(5)
1	प्रवर्ग क	10 लाख से अधिक जनसंख्या वाले राष्ट्रीय राजधानी क्षेत्र या शहरों की 10 किलोमीटर की परिधि के भीतर 1	31 दिसम्बर, 2022 तक	31 दिसम्बर, 2022 तक
2	प्रवर्ग ख	गंभीर रूप से प्रदूषित क्षेत्रों या गैर प्राप्ति शहरों की 10 किलोमीटर की परिधि के भीतर 2	31 दिसम्बर, 2023 तक	31 दिसम्बर, 2025 तक
3	प्रवर्ग ग	प्रवर्ग क और ख में सम्मिलित से भिन्न	31 दिसम्बर, 2024 तक	31 दिसम्बर, 2025 तक

1 भारत की 2011 की जनगणना के अनुसार।

2 सीपीसीबी द्वारा यथापरिभाषित।

(ii) सारणी-1 के स्तंभ (5) में यथाविनिर्दिष्ट तारीख के पूर्व निवृत्त होने के लिए घोषित तापीय विद्युत संयंत्र से, उस स्थिति में जहां ऐसे संयंत्र उनके निवृत्त होने के आधार पर छूट के लिए सीपीसीबी और सीईए को एक प्रतिज्ञान प्रस्तुत करते हैं, विनिर्दिष्ट मानदंडों को पूर्ण करने की अपेक्षा नहीं की जाएगी:

परन्तु ऐसे संयंत्रों से, उस स्थिति में जहां उनका प्रचालन प्रतिज्ञान में यथाविनिर्दिष्ट तारीख से आगे जारी रहता है, जनित विद्युत के प्रति यूनिट पर 0.20 रुपए की दर से पर्यावरण प्रतिकर उद्धृत किया जाएगा;

(iii) निवृत्त नहीं होने वाले तापीय विद्युत संयंत्र से, सारणी-1 के स्तंभ (4) में यथाविनिर्दिष्ट तारीख के पश्चात्, सारणी-2 में विनिर्दिष्ट दरों के अनुसार पर्यावरण प्रतिकर उद्धृत किया जाएगा, अर्थात् :-

सारणी-2

समय-सीमा से आगे गैर अनुपालन प्रचालन	पर्यावरणीय प्रतिकर (रुपए प्रति यूनिट जनित विद्युत)		
	प्रवर्ग क	प्रवर्ग ख	प्रवर्ग ग
0-180 दिवस	0.10	0.07	0.05
181-365 दिवस	0.15	0.10	0.075
366 दिवस और अधिक	0.20	0.15	0.10 ¹

[फा.सं. क्यू-15017/40/2007-सीपीडब्ल्यू]

नरेश पाल गंगवार, संयुक्त सचिव

टिप्पण: मूल नियम, भारत के राजपत्र, असाधारण, भाग II, खंड 3, उपखंड (i) में अधिसूचना संख्या का.आ. 844(अ), तारीख 19 नवम्बर, 1986 द्वारा प्रकाशित किए गए थे और उनका अंतिम संशोधन अधिसूचना संख्या सा.का.नि. 662(अ), तारीख 19 अक्तूबर, 2020 द्वारा किया गया।

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 31st March, 2021

G.S.R. 243(E).—In exercise of the powers conferred by sections 3, 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely:—

1. (1) These rules may be called the Environment (Protection) Amendment Rules, 2021.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Environment (Protection) Rules, 1986, in Schedule – I, in serial number 25 for letters, brackets and words “*TPPs (units) shall meet the limits within two years from date of publication of this notification”, the following shall be substituted, namely: -

“* (i) A task force shall be constituted by Central Pollution Control Board (CPCB) comprising of representative from Ministry of Environment and Forest and Climate Change, Ministry of Power, Central Electricity Authority (CEA) and CPCB to categorise thermal power plants in three categories as specified in the Table-I on the basis of their location to comply with the emission norms within the time limit as specified in column (4) of the Table-I, namely: -

Table-I

Sl. No.	Category	Location/area	Timelines for compliance	
			Non retiring units	Retiring units
(1)	(2)	(3)	(4)	(5)
1	Category A	Within 10 km radius of National Capital Region or cities having million plus population ¹ .	Upto 31 st December 2022	Upto 31 st December 2022
2	Category B	Within 10 km radius of Critically Polluted Areas ² or Non-attainment cities ²	Upto 31 st December 2023	Upto 31 st December 2025
3	Category C	Other than those included in category A and B	Upto 31 st December 2024	Upto 31 st December 2025

¹ As per 2011 census of India.

² As defined by CPCB.

(ii) the thermal power plant declared to retire before the date as specified in column (5) of Table-I shall not be required to meet the specified norms in case such plants submit an undertaking to CPCB and CEA for exemption on ground of retirement of such plant:

Provided that such plants shall be levied environment compensation at the rate of rupees 0.20 per unit electricity generated in case their operation is continued beyond the date as specified in the Undertaking;

(iii) there shall be levied environment compensation on the non-retiring thermal power plant, after the date as specified in column (4) of Table-I, as per the rates specified in the Table-II, namely:-

Table-II

Non-Compliant operation beyond the Timeline	Environmental Compensation (Rs. per unit electricity generated)		
	Category A	Category B	Category C
0-180 days	0.10	0.07	0.05
181-365 days	0.15	0.10	0.075
366 days and beyond	0.20	0.15	0.10. ”

[F. No. Q-15017/40/2007-CPW]

NARESH PAL GANGAWAR, Jt. Secy.

Note: The principle rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i) vide number S.O. 844(E), dated the 19th November, 1986 and lastly amended vide notification G.S.R. 662(E), dated the 19th October, 2020.

Fly Ash Utilization in last 3 years.

Power Plant	2019-20		2020-21		2021-22	
	Generation	Utilization	Generation	Utilization	Generation	Utilization
1200 MW	1,884,373	1,905,694 (101.13%)	2,214,681	2,306,720 (104.16%)	2,139,353	2,826,834 (132.14%)
540 MW	984,636	988,511 (100.39%)	929,897	957,948 (103.02%)	994,800	1,207,713 (121.40%)
270 MW		Ash not generated as the plant is under temporary shutdown/ suspension from December 2015.				

Details of fly ash dumped in Low Lying areas

S.No.	Name of industry	Name of Low-Lying Area	Latitude	Longitude	Khasra No. (in Acre/ Hect.)	Permission Letter No. and Date	Permitted Quantity in MT	Present Status
1	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village Tarda, Thesil Kartala, dist korba	22.275787	82.734546	Khasra 1093/1, Total Rakba-4.10 Hect.	Ltr.No.-131 dated – 27/05/2020	20,00,000MT	Approved Quantity is dumped & soil covering has been done.
2	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Barbuspur, Tehsil-Korba, Dist-Korba	22.297917	82.71945	Khasra - 118/3, Rakba-1.10 Acre, Kh.No.-225/3, Rakba-320/3, 320/5, 320/8, 322/7, Rakba-1.46 Acre Total RakbaArea – 2.56 Acre	Ltr.No.-251 dated – 11/06/2020	82,680 MT	Approved Quantity is dumped & soil covering has been done.
3	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Barbuspur, Tehsil-Korba, Dist-Korba	22.297917	82.71945	Khasra – 241/1, TotalArea – 4.28 Acre	Ltr.No.-655 dated – 02/09/2020	42,000 MT	Approved Quantity is dumped & soil covering has been done.
4	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Barbuspur, Tehsil-Korba, Dist-Korba	22.295752	82.722908	Khasra No.- 69/1, 69/2, 69/3, 81/1, 81/6, 84/1, 84/5, 98/5, 111/1, 111/4, 111/6, 111/7, 115/2, 115/7, 118/7, 124/8, 128, 141, 177, 185/2, 185/5, 185/8, 187/4, 224/2/1, 260/1, 265/2, 265/3, 276/1, 276/4, 319/4, 282/2, 282/3 having Rakba –	Ltr.No.-1517 dated – 23/02/2021	1,15,000 MT	Approved Quantity is dumped & soil covering has been done.

					11.617 Hect. and Rakba-244/1, 244/2, 319/3 Rakba-0.972 Hect. Total Rakba-12.589 Hect..			
5	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Barbuspur, Tehsil-Korba, Dist-Korba	22.29046	82.738513	Khasra No.- 184/2, 220/7 and 184/10, Rakba- 0.991 hect, 0.024 hect, 0.441 hect. Total Rakba- 0.756 Hect.	Ltr.No.-01 dated – 01/04/2021	30,000 MT	Approved Quantity is dumped & soil covering has been done.
6	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Barbuspur, Tehsil-Korba, Dist-Korba	22.296334	82.729394	Khasra No.- 74/8, 114/3/2, 114/6, 117/8, 169/4, 184/7, 202/3, 314/4, 342/2, 344/6 Total Rakba-3.914 Hect.	Ltr.No.-42 dated – 21/05/2021	1,50,000 MT	Approved Quantity is dumped & soil covering has been done.
7	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Dhongdarha, Tehsil-Kartala Dist-Korba	22.265851	82.835632	Khasra No.- 416/1, 417, 419/3, 636/4, Total rakba - 4.569 hect.	Letter.No.- 383 dated – 16/08/2021 and Letter No. 790 dated 02/12/2021	5,00,000 MT	Approved Quantity is dumped & soil covering has been done.
8	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Naktikhar Tehsil-Korba, Dist-Korba	22.330232	82.776990	Khasra No.- 235, 237/2, 246, 252/2, 245/2, 286, 797/31, 952, 955, 957, 958, 959/2, Total Rakba-4.596 hect.,	Ltr.No.-498 dated – 16/09/2021	90,000 MT	Approved Quantity is dumped & soil covering has been done.
9	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Urga Tehsil-Korba, Dist-Korba	22.260789	82.724249	Khasra No.1194/6, 1194/3, 1112/2, 1112/4, 1194/6, 1193, 1203/1, 1203/2, 1194/7, 1202/2, 1202/3, 1120/2, 1120/3, 1191/1[k, 1191/3, 1206, 1194/2, 1195/1, 1112/3, 1070/17	Ltr.No.-622 dated – 21/10/2021	3,00,000 MT	Permitted Quantity is dumped & soil covering has been done.

					Total Rakba – 8.87 Acre and Khasra No. 1031, 1102/6, 1158/4, 1162/1घ, 1159/4, 1161/1/d2, 1162/1B, 1162/1घ, 1121, 1190/1, 1190/2, 1191/4, 1194/1, 1196/4, 1162/1ख, 1119/2, 1119/5, 116/7/1, 1167/2, 1070/19, 1070/20, 1070/21, 1070/23, 1070/27, 1070/28, 1029/29 Total Rakba- 13.51 ½ Acre. Total Rakba-22.38 Acre.,			
10	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Gram Panchyat – Katbitla, Tehsil-Korba, Dist-Korba	22.249854	82.689097	Khasra No.- 6/1, 38//1 Total rakba- 5.2 Hect.	Ltr.No.-783 dated – 01/12/2021	3,00,000 MT	Approved Quantity is dumped & soil covering has been done.
11	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Kurudih (Barbuspur) Tehsil-Korba, Dist-Korba	22.297127	82.737829	Khasra No. 6/4, 6/5, 6/6, 6/7 Total Rakba- 0.47 Acre	Ltr.No.-1279 dated – 11/03/2022	25,000 MT	Approved Quantity is dumped & soil covering has been done.
12	M/s Balco Aluminium Company Limited, 540+1200 MW TPP, Balco Nagar, Dist-Korba(C.G.)	Village – Kukricholi (Bhaisma), Naktikhar Tehsil-Korba, Dist-Korba	22.278075	82.746998	Khasra No. 21, 23, 34/1, 34/3, 38,42/4, 43/1,43/2 Rakba 4.963 Hect. And Khasra No. 261/1 Rakba- 2.630 Hect. Total Rakba- 7.593 Hect.	Ltr.No.-62 dated – 22/04/2022	5,00,000 MT	Dumping of fly ash is under process.
13	M/s Balco Aluminium Company Limited,	Village – Nonbirra Tehsil-Kartala,	22.261286	82.815404	Khasra No. 667/3 and 680/2d	Ltr.No.-88 dated – 11/03/2022	1,00,000 MT	Dumping of fly ash is under process.

	540+1200 MW TPP, Balco Nagar, Dist- Korba(C.G.)	Dist-Korba			Total Rakba- 2.122 Hect			
14	M/s Lanco Amarkantak Power Ltd, 600 MW TPP, Vill- Patadhi, Dist- Korba(C.G.)	Village – Risda Tehsil- Korba, Dist-Korba	22.382397	82.746415	724/1, 726/1, 726/4, 726/5, 727/4, 727/5, 728 and 729/2, Total Rakba- 8.43 Acre	Ltr.No.-1094 dated – 28/01/2022	10,00,000 MT	Dumping of fly ash is under process.



क्षेत्रीय कार्यालय

छत्तीसगढ़ पर्यावरण संरक्षण मंडल

तहसील कार्यालय के पास, रामपुर, कोरबा, जिला-कोरबा(छ.ग.) 495677

ई. मेल-rocecbkorba@gmail.com

क्रमांक 288 / क्षे.का. / छ.ग.प.सं.मं. / 2022
प्रति,

कोरबा, दिनांक 06/06/2022

मुख्य कार्यकारी अधिकारी,
मेसर्स भारत एल्युमिनियम कंपनी लिमिटेड,
बालको नगर, कोरबा, जिला-कोरबा(छ.ग.)

- विषय :- क्षेत्रीय कार्यालय, कोरबा द्वारा उद्योग को फलाई ऐश भराव हेतु जारी अनापत्ति प्रमाण पत्र में निहित शर्तों का पालन प्रतिवेदन प्रस्तुत करने बाबत।
- संदर्भ :- मेसर्स भारत एल्युमिनियम कंपनी लिमिटेड, बालको नगर, कोरबा, जिला-कोरबा (छ.ग.) को जारी अनापत्ति प्रमाण पत्र क्रमांक -1200 दिनांक 05.10.2018, पत्र क्रमांक -1414 दिनांक 27.11.2018, पत्र क्रमांक -524 दिनांक 18.06.2019, पत्र क्रमांक -251 दिनांक 11.06.2020, पत्र क्रमांक -421 दिनांक 15.07.2020, पत्र क्रमांक -655 दिनांक 02.09.2020, पत्र क्रमांक -1517 दिनांक 23.02.2021, पत्र क्रमांक -1550 दिनांक 01.03.2021, पत्र क्रमांक -1682 दिनांक 18.03.2021, पत्र क्रमांक -01 दिनांक 01.04.2021, पत्र क्रमांक -42 दिनांक 21.05.2021, पत्र क्रमांक -189 दिनांक 05.07.2021, पत्र क्रमांक -383 दिनांक 16.08.2021, पत्र क्रमांक -498 दिनांक 16.09.2021, पत्र क्रमांक -622 दिनांक 21.10.2021, पत्र क्रमांक -712 दिनांक 16.11.2021, पत्र क्रमांक -783 दिनांक 01.12.2021, पत्र क्रमांक -790 दिनांक 02.12.2021, पत्र क्रमांक -940 दिनांक 24.12.2021, क्रमांक -1052 दिनांक 13.01.2022, पत्र क्रमांक -1279 दिनांक 11.03.2022, पत्र क्रमांक -1281 दिनांक 11.03.2022, पत्र क्रमांक -62 दिनांक 22.04.2022, पत्र क्रमांक -88 दिनांक 28.04.2022, पत्र क्रमांक 131 दिनांक 11.05.2022

उपरोक्त विषयांतर्गत संदर्भित पत्रों के माध्यम से लो-लाईन क्षेत्रों में फलाई ऐश भराव हेतु अनापत्ति प्रमाण पत्र इस कार्यालय द्वारा जारी किया गया है। उक्त के परिपेक्ष्य में आपके द्वारा की गई कार्यवाही की जानकारी के साथ ही अनापत्ति प्रमाण पत्रों में निहित शर्तों का बिन्दुवार पालन प्रतिवेदन प्रत्येक माह इस कार्यालय को फोटोग्राफ एवं विडियोग्राफी के साथ प्रेषित किया जाना सुनिश्चित करें।

Asalu
क्षेत्रीय अधिकारी,

छ.ग.पर्यावरण संरक्षण मंडल, कोरबा

**REPORT ON
“MONITORING AND EVALUATION OF
PLANTATION”
AT**

**Bharat Aluminium Company Limited
BALCO Nagar, Dist.: Korba (C.G.)**

March-2021



“NAV AASTHA JAN VIKAS SEVA SAMITI”

**8/5, “JASMATI BHAWAN”, NEAR OLD KATTHA FACTORY,
GODHANPUR, AMBIKAPUR - 497001**

CONTACT-#99261-54460#94255-80401

WEBSITE - www.navaastha.in Email - najvss@gmail.com

WHO WE ARE?

NAV AASTHA JAN VIKAS SEVA SAMITI is a registered NGO under societies registration act. 1973 of Indian constitution, registered on 07th April 2005 at Raipur (C.G.). The working area of the organization is whole Chhattisgarh. Our main focus is towards the Environment, Forest and Biodiversity conservation, youth development and women and child empowerment in the state.



We have been working continuously in betterment of the people of Chhattisgarh (*chhattisgarhiya*) in educational, Social and many more sectors by the help of schemes of govt. The organization works under many schemes of the respectable govt. like - **Green India Mission (GIM)**, **Bio-diversity Program**, **Integrated Watershed Management Program (IWMP)**, **SGSY**, **SHG forming**, **JFMC capacity building** and many more. We are also engaged in **Monitoring and Evaluation** of plantations of government entities as well as private entities.

“New challenges new innovations.....”

CENTRAL POLLUTION CONTROL BOARD

The Central Pollution Control Board (CPCB), statutory organization, was constituted in September, 1974 under the Water (Prevention and Control of Pollution) Act, 1974. Further, CPCB was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.



It serves as a field formation and also provides technical services to the Ministry of Environment and Forests of the provisions of the Environment (Protection) Act, 1986. Principal Functions of the CPCB, as spelt out in the Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981, (i) to promote cleanliness of streams and wells in different areas of the States by prevention, control and abatement of water pollution, and (ii) to improve the quality of air and to prevent, control or abate air pollution in the country.

Air Quality Monitoring is an important part of the air quality management. The **National Air Monitoring Programme (NAMP)** has been established with objectives to determine the present air quality status and trends and to control and regulate pollution from industries and other source to meet the air quality standards. It also provides background air quality data needed for industrial siting and towns planning.

Besides this, CPCB has an automatic monitoring station at ITO Intersection in New Delhi. At this station Resizable Suspended Particulate Matter (RSPM), Carbon Monoxide (CO), Ozone(O₃), Sulphur Dioxide(SO₂), Nitrogen Dioxide(NO₂) and Suspended Particulate Matter (SPM) are being monitored regularly. This information on Air Quality at ITO is updated every week.

Plantation Details: M/s Bharat Aluminium Co. Ltd (BALCO) Korba(CG)

Year	BALCO PLANT & TOWNSHIP		BCPP		Total saplings including BALCO & BCPP	No of saplings Survived	Percentage Survived Percentage %	Location	Species		
	No of Sapling planted BALCO	Area in Acre	No of sapling planted BCPP	BCPP Area in Acre							
2002-03	55000	54	10000	10	65000	51745	79.61	Plant boundary wall plantation sites, inside township, BCPP township, plant and ash dyke area and roadside of plant and township.	Sagwan, Karanj Sarai, Nilgiri, subabul, Gulmohar, Mango and Fruit bearing saplings		
2003-04	30000	29	10000	10	40000	33252	83.13				
2004-05	11000	10	21000	21	32000	25335	79.17				
2005-06	57000	56	10000	10	67000	53278	79.52				
2006-07	130000	128	5000	5	135000	106782	79.10				
2007-08	35000	32	5000	5	40000	33600	84.00				
2008-09	13000	12	1000	1	14000	11276	80.54			BCPP plant and township plantation area	Sagwan, Karanj Sarai, Nilgiri, Subabul, Gulmohar, Mango and Fruit bearing saplings

2009-10	53500	52.5	1500	1	55000	40100	72.91	Township and Hariyar Chhattisgarh plantation programme (Roadside plantation in Devpahri road)	Sagwan, Karanj Sarai, Nilgiri, subabul, Gulmohar, Mango and fruit bearing saplings
2010-11	54850	54	150	0	55000	39870	72.49	Hariyar Chhattisgarh plantation program, BCPP	Sagwan, Karanj, Sarai, Nilgiri, subabul, Gulmohar, Mango and fruit bearing saplings
2011-12	20000	18.5	0	0	20000	16875	84.38	Near Stadium, Joggers park	Ashoka, Sagwan, Karanj, Gulmohar
2012-13	5600	5	0	0	5600	4826	86.18	Near Kali Mandir	Karanj, Gulmohar
2013-14	4150	4	650	0.65	4800	4025	83.25	Inside Plant, BCPP Ash Dykes, DPS School	Karanj, Neem Gulmohar, Guava
2014-15	35700	34	0		35700	30638	85.82	Lalghat plantation area, Inside Roads	Karanj, Sagwan, mix Fruit plants
2015-16	30000	28	0		30000	25434	84.78	Near township office, ash dykes, cooling tower inside / outside, ETP, boundary wall 1200 MW, Behind alumina plant	Karanj, Sagwan, mix fruits bearing plants
2016-17	30000	28	0		30000	25500	85.00	Balco Plant and around township	Karanj, Satwan, Gulmohar, Guvava, Jamun, Sehtut, Sagwan

2017-18	5000	4	0		5000	4100	82.00	In and around plant and township	Karanj, Gulmohar, Guvava, Jamun, Sehtut, Sagwan, Mango, Jamun
2018-19	5000	4	0		5000	4000	80.00	In and around plant and township	Karanj, Satwan, Gulmohar, Guvava, Jamun, Sehtut, Sagwan, Mango, Jamun, Black Sirus, Neem
2019-20	15000	13	0		15000	12900	86.00	Near ash dyke, township and plant premises	Karanj, Satwan, Mango, Gulmohar, Bamboo, Amla, Neem
2020-21	10000	9	0		10000	8420	84.20	Ash dyke 3 Band at STP area	Karanj, Satwan, Mango, Gulmohar, Bamboo, Amla, Neem
Total*	599800	575	64300	65	664100	531956	80.10		

***Above details is for overall plantation carried out at Balco nagar Korba location which include statutory compliance for plantation for individual units of M/s BALCO Korba.**

Plantation Details

S.No	Industry/ Mines Name	Total area of industry/Mines in Acres	Actual plantation carried out by industry/mines(in acres)	Remarks
1	Integrated Aluminium and Power complex	948	575	As per EC/CTE/CTO condition the targeted plantation has been completed in all units of BALCO Korba.
2	Township	650		
3	Ash pond	375		
Total Land		1973		
4	Balco 270 MW Power plant	196 (Including Ash Dykes)	65	

CONCLUSION

The Survival percentage of plantation done by “**Bharat Aluminium Company Limited, BALCO Nagar, Dist.: Korba (C.G.)**” is about 80.10% which is **Outstanding** performance by the company.

It is observe that there is luxuriant growth of the plants with large canopy area. All the plantation work of the company is satisfactory and specifically the maintenance done at the site is praiseworthy. We hope this will continue in future for developing greenery all around plant and township.

The of icial staff of the company was so co-operative, enthusiastic and helpful towards the work.

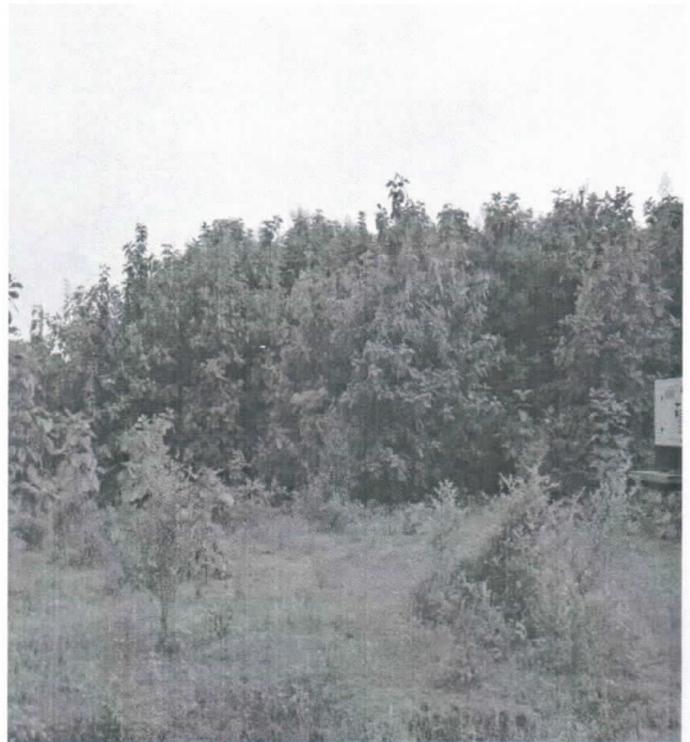
GRADING OF PROJECT ON A SCALE OF 1 TO 10

Overall Grading of the Project	Outstanding (8-10)	Very Good (5-8)	Good (3-5)	Poor (<3)
	8.1			



Note: As informed by BALCO that they are initiating additional plantation of around 1,00,000 saplings in the area of approx. 88 Acres (Ash dykes, Open area, etc.) during FY 2021-22.

ON SITE PHOTOGRAPHS





ENVIRONMENTAL
CLEARANCE

Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

To,

The Associate Vice President
BALCO
Cosmos Building first floor, Balco Nagar, Korba, Haryana-495684

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/CG/IND/2536/2007 dated 20 Sep 2021. The particulars of the environmental clearance granted to the project are as below.

- | | |
|--|--|
| 1. EC Identification No. | EC22A008CG177331 |
| 2. File No. | J-11011/123/2007-IA.II(I) |
| 3. Project Type | Expansion |
| 4. Category | A |
| 5. Project/Activity including Schedule No. | 3(a) Metallurgical industries (ferrous & non ferrous) |
| 6. Name of Project | Aluminium Smelter Plant and 300 MW Captive Power Plant |
| 7. Name of Company/Organization | BALCO |
| 8. Location of Project | Chhattisgarh |
| 9. TOR Date | N/A |

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 22/04/2022

(e-signed)
Sundar Ramanathan
Scientist E
IA - (Industrial Projects - 1 sector)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.

This is a computer generated cover page.

PARIVESH

*(Pro-Active and Responsive Facilitation by Interactive,
and Virtuous Environment Single-Window Hub)*



This refers to your proposal no. IA/CG/IND/2536/2007 dated 20/09/2021 submitted through Parivesh Portal and subsequent ADS replies dated 10/10/2021, 08/12/2021, 06/03/2022 & 11/03/2022 seeking for grant of **Environment Clearance (EC)** for the project mentioned above.

2. As per the provisions of the Environment Impact Assessment (EIA) Notification, 2006, the above-mentioned project/activity is listed at schedule no. 3 (a) Metallurgical industries (Ferrous & non-ferrous) under Category "A" of the schedule of the EIA notification, 2006 and appraised at Central level.
3. Accordingly, the above-mentioned proposal has been considered by the **Reconstituted EAC (Industry-I)** in its **45th meeting held on 28th - 29th September, 2021, reconsidered in 47th meeting held on 28th - 29th October, 2021; 49th meeting held on 16th - 17th December, 2021 and 2nd meeting of new committee held on 22nd - 23rd March, 2022.** The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed at <https://parivesh.nic.in/>.
4. The details of the proposal are as per the EIA report submitted by the proponent. The salient features of the expansion proposal as presented during the above-mentioned meeting of EAC (Industry 1) are as under: -

S.No.	Particulars	Details
a.	Terms of Reference for undertaking EIA study	19/09/2017
b.	Period of baseline data collection	1 st December 2019 to 29 th February 2020
c.	Date of Public Consultation	17/02/2021
d.	Action plan to address the PH issues	In addition to EMP budget of Rs. 712.78 crores, an amount of Rs. 70.24 Crores have been earmarked to address the issues raised during public consultation. Detail of activities proposed attached as Annexure 1 .
e.	Location of the project	Risda Village, Korba Tehsil, Korba District, Chhattisgarh.
f.	Latitude and Longitude of the project site.	BALCO Complex a) Latitude: 22°23'25.49"N to 22°24'11.57"N b) Longitude: 82°43'33.55"E to 82°44'58.01"E Township a) Latitude: 22°24'11.29"N to 22°24'47.39"N b) Longitude: 82°44'47.70"E to 82°46'22.52"E Ash Pond a) Latitude: 22°24'22.79"N to 22°24'50.21"N b) Longitude: 82°43'43.18"E to 82°44'54.78"E Proposed Aluminium Smelter Plant: a) Latitude: 22°23'24.5"N to 22°23'49.4"N b) Longitude: 82°43'32.9"E to 82°44'09.5"E
g.	Total land	Total land: 1099.91 ha (or) 2718 acres including Township, Ash Pond & other land outside.
h.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	The proposed expansion will be carried out in an area of 39.67 ha available within the existing plant area of 383.63 ha. No additional land is required for proposed expansion. Total land of 1099.91 ha is already under the possession of BALCO.

S.No.	Particulars	Details
i.	Existence of habitation & involvement of R&R, if any	No R&R involved.
j.	Elevation of the project site	295 m - 300 m above MSL
k.	Involvement of Forest land if any.	No Forest Land is involved
l.	Water body exists within the project site as well as study area	Project Site: Nil Study Area: <ul style="list-style-type: none"> • Belgari nala (0.1 km, NW) • Dhengu nala (0.1 km, S) • Hasdeo river (1.5 km, NW)
m.	Existence of ESZ / ESA / national park / wildlife Sanctuary / biosphere Reserve / tiger reserve / elephant reserve etc. if any within the study area	Nil.
n.	Project cost	INR 6387 Crores
o.	EMP cost	INR 712.78 Crores (Capital Cost) INR 47.28 Crores (Recurring Cost)
p.	Employment opportunity	1050 nos. (Direct) and 4000 nos. (Indirect-contractual)
q.	Water and Power requirement	Water – 4900 m ³ /day [Existing: 2500 m ³ /day and Expansion: 2400 m ³ /day] Power – 1750 MW [Existing: 950 MW and Expansion: 800 MW]

Unit configuration and capacity:

S No	Name	Existing Units		Proposed Units		Total (Existing +Proposed)	
		Configuration	Production	Configuration	Production	Configuration	Production
1	Aluminium Smelter	2.5 LTPA 3.25 LTPA	5.75 LTPA	5.1 LTPA	5.1 LTPA	10.85 LTPA	10.85 LTPA

5. The EAC (Industry-I) in its 2nd meeting held on 22-23rd March, 2022, based on information & clarifications provided by the project proponent and after detailed deliberations recommended the proposal for grant of Environment Clearance subject to stipulation of specific and general conditions as detailed in the paragraph given below.
6. The MoEF&CC has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the Expert Appraisal Committee (Industry-1) hereby decided to grant Environment Clearance for instant proposal of **M/s. Bharat Aluminium Company Limited (BALCO)** under the provisions of EIA Notification, 2006 subject to the following specific conditions and general conditions:

A. Specific Conditions

- i. The project proponent shall abide by all orders and judicial pronouncements, made from time to time in case no. IA No.1424-1425 of 2005 filed in W.P. (C) No.202/1995 (T N Godavarman matter) in Hon'ble High Court of Chhattisgarh; Civil Appeal No. 3236/2020 (BALCO vs MoEF&CC& Others) in Hon'ble Supreme Court and Writ Petition (PIL) 58/2020 (Dilendra Yadav vs CECB &Ors) in Hon'ble High Court of Chhattisgarh.
- ii. The poly-aromatic hydrocarbons (PAH) from the carbon plant (anode bake oven) shall

- not exceed 2 mg/Nm³. The data on PAH shall be monitored quarterly and report shall be submitted regularly to the Ministry/Regional Office at Raipur and CECB.
- iii. Particulate fluoride emissions shall not be more than 0.65 mg/Nm³ and fugitive particulate fluoride emissions from pot room shall not be more than 1.85 mg/Nm³.
 - iv. SO₂ and NO_x emissions shall be controlled by replacing Furnace Oil with Low Sulphur Heavy Stock (LSHS) within 6 months. Compliance status in this regard shall be submitted to the Regional Office of the MoEF&CC latest by 30/06/2022.
 - v. Project proponent shall achieve the Fluoride consumption less than 10 kg/tonne of Aluminium production for the existing 5.75 LTPA Aluminium smelter by 30/04/2022 and for the proposed 5.1 LTPA expansion project right from the day of commissioning of the unit.
 - vi. Total water requirement for the existing and expansion project shall not exceed 4900 KLD.
 - vii. Present stock of SPL (48000 T) and legacy SPL stock shall be liquidated by December 2022 as committed.
 - viii. Refractory SPL stock of 30,000 T stored in covered shed on concrete floors shall be disposed off within 18 months from the date of approved Standard Operating Procedure (SOPs) by CPCB.
 - ix. Present stock of Shot Blasting Dust stored in covered shed in plant premises is 10,000 T which shall be disposed off within 18 months from the date of approved Standard Operating Procedure (SOPs) by CPCB.
 - x. PM levels shall be less than 30 mg/Nm³ for all units under expansion. In case of older units, PP shall initiate retrofitting/modification action to achieve the PM emission level of 30 mg/Nm³ by October, 2024.
 - xi. Leachate from Secured Land Fill (SLF) shall be collected and transferred to the solar drying ponds. During rainy season, SLF shall be covered with tarpaulin to minimize leachate generation. Regular monitoring of cyanide and fluoride in waste water shall be monitored.
 - xii. The company shall develop rainwater structures to harvest the run-off water for recharge of ground water as per the action plan submitted in the EIA report.
 - xiii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Aluminium sector shall be strictly implemented.
 - xiv. Legacy ash stocks of 18.2 Million tons shall be liquidated by December 2024. The vehicles carrying ash from dyke shall use tarpaulin covers. No additional ash pond shall be developed for ash disposal.
 - xv. Performance monitoring of pollution control equipment shall be taken up yearly and compliance status in this regard shall be reported to RO.
 - xvi. BALCO shall develop captive refractory detoxifying facility at project site by 31st March, 2024 as committed after obtaining requisite statutory approvals from the concerned Competent Authority.
 - xvii. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.
 - xviii. The area of sampling and analysis of fluoride in soil and forage should extend up to 10 kilometers radius of plant premises covering upwind and downwind directions. Further, fluoride sampling and analysis should be taken quarterly at the nearest irrigated lands growing crops, vegetables, and other products of human consumption.

- xix. The major emissions are from the pot room roof. The sampling frequency should be increased, and sampling is done at multiple locations. The laser-based advance technology shall be in place by March, 2023 for continuously monitor gaseous fluoride emissions from pot rooms on real time basis.
- xx. Wheel Washing mechanism shall be provided in entry and exit gates with complete water recirculation system
- xxi. Three tier Green Belt shall be developed in a time frame of one year covering 33% of total area with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. GB action plan is given as below.

S. No.	Details	Total Area (in ha)	Existing Plantation Area (in ha)	On-Going Plantation Area (in ha)	*Action Plan: Green Cover Proposed up to FY 24 (in Ha)			Total Green Cover (in Ha)	Total Green Cover (%)	Species Proposed
					FY 22	FY 23	FY 24			
1	Integrated Aluminium Smelter Complex	383.63	97.72	0.81	5.0	5.85	17.40	126.78	33%	Karanj, Neem, Peepal, Sal, Sarai, Arjun, Sagon, Banyan, Rain Tree, Gulmohar, Mahua, Kadam, etc
2	Ash Dyke	151.75	8.87	-	6	10	9.24	34.11		
3	Township Land	263.04	126.49	6.84	2	2	2	139.33		
4	Balance Other Land	301.49	20.94	7.12	10	10	15	63.06		
	Total Area	1099.91	254.02	14.77	23	27.85	43.64	363.28		

- xxii. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.

B. General Conditions

I. Statutory compliance:

- i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission as well as 4 Nos. Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.
- iii. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- iv. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash;
- v. The project proponent shall provide wind shelter fence and chemical spraying on the

- raw material stock piles;
- vi. Ventilation system shall be designed for adequate air changes as per the prevailing norms for all tunnels, motor houses, and cement bagging plants.
 - vii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
 - viii. Adopt measures to recover fluoride gas from electrolytic cells and recycle the same in the process.
 - ix. Practice use of low-Sulphur tars for baking anodes.
 - x. Make efforts to increase the life of pot lining through better construction and operating techniques.
 - xi. Design the pot roofs with louvers and roof ventilators

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 742 (E) dated 30th August 1990 and further amended vide G.S.R 46 (E) dated 3rd February 2006 (Aluminium); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- iv. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off
- v. Water meters shall be provided at the inlet to all unit processes in the cement plant.
- vi. The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

- i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

- i. The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases.
- ii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- iii. Provide LED lights in their offices and residential areas.

VI. Waste management

- i. Used refractories shall be recycled.
- ii. Oily scum and metallic sludge recovered from ETP shall be mixed, dried, and briquetted and reused.

VII. Green Belt

- i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the Programme for reduction of the same including carbon sequestration including plantation.
- ii. Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

VIII. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.
- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Environment Management

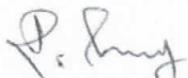
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- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.
 - ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
 - iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

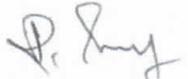
- iv. The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry 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.
- xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

7. This issues with the approval of the Competent Authority.


(Sundar Ramanathan)
Scientist 'E'

Copy to:-

1. Secretary, Department of Environment, Government of Chhattisgarh Secretariat Raipur.
2. Regional Officer, Ministry of Environment, Forest and Climate Change, Regional Office (WCZ), Ground Floor, East Wing, New Secretariat Building, Civil Lines, Nagpur – 44000.
3. Chairman, Central Pollution Control Board, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
4. Chairman, Chhattisgarh Environment Conservation Board, Nanak Niwas, Civil Lines, Raipur, Chhattisgarh.
5. Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
6. District Collector, Korba District, Chhattisgarh.
7. Guard File/Record File/Monitoring File.
8. MoEF&CC website


(Sundar Ramanathan)
Scientist 'E'

Annexure-1

Action plan as per MoEF&CC O.M. dated 30/09/2020:

Point	Topic	Work to be done	Units	Total tentative cost (in crore)	F Y'22	F Y 23	Completion date		
1	Infrastructure for Road Safety	Road & peripheral development to facilitate safe communication for public	2 number	9.7	1 units	1 unit	--		
					4.7 Cr	5.0 Cr			
2	Training & Skill Development Program for Local Youth	Skill Development Trainings to youths - 2500	2500 number	6.2	790 units	1710 unit	March'23		
		Sustainable livelihood through Farm based intervention - 3000 farmers & 24 villages	3000 number	5.88	1000 units	2000 units	March'23		
3	Community health and community rural infrastructure	Various health initiatives in 45 communities, benefitting 80K people, through Mobile Health Vans, Menstrual Health Management, TB, HIV, Maternal and child health and COVID relief activities)	8000 number	7.0	67000 units	80000 units	March'23		
		Community toilets - 25	25 number	2.0	--	25 units	March'23		
		Water Supply through Pipeline - 5 villages (Belgiri Basti, Rogbehri, Dondro, Jambahar&Parsabhatta)	20 km	2.5	5 units	15 units	March'23		
		Street Lights - 150	150 numbers	8.0	50 units	100 unit	March'23		
		Community halls & Repairs of community stages - 5 & 10	5 & 10 numbers	3.0	--	5 & 10 units	March'23		
		Children Park & Open Gyms - 5	5 numbers	1.0	--	5 units	March'23		
		Bridge - 1	1	0.4	1 unit	--	March'22		
		Storage shed - 1	1	0.15	1 unit	--	March'22		
		Road construction - 5000 M (1000 M RCC & 4000 M Tar)	5000 m	3.0	--	5000 m	March'23		
		Safety signages in 20 communities	20 number	0.5	10 units	10 units	March'23		
		100 bedded Covid hospital for Public	1 number	6.0	1 unit	--	March'2022		
		Support to sports and cultural activities of the area - 40	40 number	0.92	40 units	40	March'23		
						0.42 Cr	0.50 Cr		
		4	Education	Project Connect (Covering 8 Schools & 1800 Students)	1800 number	1.02	1400 units	1800 units	March'23
				Renovation of 20 Schools covering 40 communities including furniture for 10 schools	20 number	2.4	--	20 units	March'23
Renovation of 55 Aganwadis for Nand Ghars covering 40 communities	55 numbers			4.0	16 units	39 units	March'23		
				1.0	--	1 unit	March'23		

Point	Topic	Work to be done	Units	Total tentative cost (in crore)	F Y'22	F Y 23	Completion date
		Coaching Facilities for engineering and CA field (60 Students)	1 number		--	1.0 Cr	
5	Women Empowerment	Project Unnati - Strengthening of SHGs and income generation activities - 5000 Women in 45 communities	5000 Women	5.57	4000 no 1.07 Cr	5000 no 4.5 Cr	
Total in Crore				70.24	22.19	48.05	

Signature Not Verified

Digitally signed by Sundar Ramanathan Scientist E

Date: 4/22/2022 10:26:29 AM



कार्यालय कलेक्टर एवं जिलादण्डाधिकारी, कोरबा, जिला-कोरबा (छत्तीसगढ़)

क्रमांक 299 /क्षे.का.प.सं.मं./2022

कोरबा दिनांक 07/06/2022

// आदेश //

भारत सरकार पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली के अधिसूचना दिनांक 31 दिसम्बर 2021 के द्वारा थर्मल पॉवर प्लांट से जनित फ्लाई ऐश का अपवहन किये जाने के लिए अधिसूचना जारी की गई है। अधिसूचना का प्रभावी क्रियान्वयन किये जाने हेतु कोरबा जिले में निम्नानुसार समिति का गठन किया जाता है :-

1	कलेक्टर, कोरबा	अध्यक्ष
2	अनुविभागीय अधिकारी(राजस्व), अनुविभाग-कोरबा/ कटघोरा/ पोड़ी-उपरोड़ा/ पाली, जिला-कोरबा (अपवहन क्षेत्र के अनुसार)	सदस्य
3	उप संचालक(खनि.प्रशासन),कोरबा, जिला-कोरबा	सदस्य
4	क्षेत्रीय अधिकारी,छत्तीसगढ़ पर्यावरण संरक्षण मंडल, कोरबा	समन्वयक

फ्लाई ऐश का अपवहन Low Lying Area and Mine Voids में किये जाने से पूर्व थर्मल पॉवर प्लांट द्वारा छत्तीसगढ़ पर्यावरण संरक्षण मंडल, कोरबा में आवेदन प्रस्तुत किये जाने के उपरांत आवेदन पर समिति द्वारा जाँच कार्यवाही कर, अनुमति हेतु विचार/अनुशंसा की जावेगी। तदानुसार अनुशंसा पश्चात छत्तीसगढ़ पर्यावरण संरक्षण मंडल, कोरबा द्वारा अनापत्ति/अनुमति प्रदान करने की कार्यवाही सुनिश्चित की जावेगी।

यह आदेश तत्काल प्रभाव से लागू होगा।

कलेक्टर,

कोरबा, जिला-कोरबा(छ.ग.)

पृ. क्रमांक 300/क्षे.का.प.सं.मं./2022

दिनांक07/06/2022

प्रतिलिपि :-

1. सदस्य सचिव, छ.ग.पर्यावरण संरक्षण मंडल, पर्यावास भवन सेक्टर-19, नवा रायपुर अटल नगर, रायपुर की ओर कृपया सूचनार्थ प्रेषित।
2. सर्व संबंधित अधिकारी को सूचनार्थ एवं पालनार्थ।

कलेक्टर,

कोरबा, जिला-कोरबा(छ.ग.)