

Item No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
CENTRAL ZONE BENCH, BHOPAL**
(Through Video Conferencing)
Appeal No. 12/2022 (CZ)

Tarun Rathore

Appellant(s)

Versus

MoEF&CC & Ors.

Respondent(s)

Date of Completion of Hearing and Reserving of Order : 21.10.2022

Date of Uploading of Order on the Website : 14.11.2022

**CORAM: HON'BLE MR. JUSTICE SHEO KUMAR SINGH, JUDICIAL MEMBER
HON'BLE DR. ARUN KUMAR VERMA, EXPERT MEMBER**

For Appellant(s):

Mr. Prakash Pandey, Adv.

For Respondent(s):

Mr. P.C. Sen, Sr. Adv.
Ms. Samridhi Sharma, Adv.
Mr. Shireesh Shrivastav, Adv.
Mr. Shivanshu Singh, Adv.
Mr. Rohit Sharma, Adv.
Ms. Parul Bhadoria, Adv.

ORDER

1. This appeal has been filed against Environmental Clearance dated 22.04.2022 granted by the Ministry of Environment, Forests and Climate Change to M/S Bharat Aluminium Company Limited (BALCO) for its expansion of Aluminium Smelter from 5.75 LTPA to 10.85 LTPA in Village Risda, Tehsil Korba District Korba Chhattisgarh.
2. The contention of the appellant is that Environmental Impact Assessment was made but various factors have not been taken into consideration and respondent no 3 has received Environment Clearances by submitting false and misleading data in front of Expert Appraisal Committee. MoEF&CC has granted EC for Expansion of Aluminium Smelter and 300 MW Captive Power Plant but in EIA, Public Hearing Conducted only for expansion of Aluminium Smelter 5.75 LTPA to 10.85 LTPA and without EIA And Public Hearing, EC is granted for 300 MW captive power plant.

3. Second ground as contented by the appellant is that project is situated in Nagar Nigam area and permission from town and country planning was not taken. Further contentions are that the Respondent no 3 has Ash Dykes situated within 500 meters of residential area and dense population is residing in these areas, further Belgari Nala also flows, just adjacent to Ash Dyke, As usual practice, Respondent no 3 is dumping ash and fly ash slurry into Nala, approx. 2 lakh metric ton fly ash dump outside ash dyke grampanchayat land village- jambahaar and rogbahari and other residential areas. On objection by local people, goons of Respondent no 3 show them permissions issued from CECB , which are of course issued without physical inspection of ash Dumping Area. As on Date Surrounding 10 Kms of Ash Dyke, Overloaded trucks of Respondent no 3 have dumped ash Near Water Bodies, Besides Roads, Residential Areas, Irrigation Land without laying any protection of leaching water.

That Respondent No 3 has made submissions through their EIA report that entire coal Transport for their power plants is being done by Rail. But fact is that In addition to Rail around 20% coal requirement of Balco's Power Plant is done through Road Trucks 300 to 500 trucks. And continuous movement of coal carrying vehicles and Fly Ash carrying vehicles 100 to 300 trucks through residential area has caused severe pollution damage and continuous road accidents are occurring due to this. **Further Balco** installed Truck Tippler project inside their Plant Boundary without **any prior approval of Environment Department. Nor any** clearance for Truck Tippler was taken by any of the local **authority and coal dust emissions due to truck tippler operation** is causing severe damage to surrounding environment.

4. That Respondent no 3 started expansion of their proposed smelter long before getting Environment Clearance and contract for such expansion was awarded to Bridge & Roof Company (I) Ltd, and labour license was issued to Bridge and Roof Company, and they started work in collusion

with Regional Office of Environment Board and forest office. And in spite of written complaints, RO office never bothered to make inspection of site. More than 1000 fully grown trees were bulldozed for project area leveling, Road and Drainage. Batching Plant Installed in green belt outside plant premises and work was started before getting EC.

5. Further that provisions of Solid Waste Management Rules, 2016 has not been met by the Project Proponent and this has adverse impact on air and water resource.
6. The matter was taken by this Tribunal and the notices were issued to the respondent.
7. Respondent no. 1, MoEF&CC has filed the reply, which is as follows :-

- i. The PP had earlier obtained the EC from this Ministry vide letter J-11011/123/2007-IA-II(I) dated 16.09.2008 for Expansion of Aluminium Smelter Plant by (3.5 to 9.0 LTPA) and Captive Power Plant (300 MW) at Korba, Chhattisgarh by M/s BALCO.*
- ii. That the PP submitted the application for Terms of Reference (hereinafter referred to as ToR) in prescribed format (Form-I), along with copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for expansion of aluminum Smelter production capacity from 5.75 LTPA at Korba, Chhattisgarh on 20.08.2017. After due deliberations, the Answering Respondent granted ToR on 19.09.2017.*
- iii. That the project was considered in the 45th meeting of EAC (Industry-I) held on 28-29th September, 2021 wherein the Committee deferred the consideration of the proposal and sought requisite information.*
- iv. Subsequently, after the submission of the requisite information by the PP, the project was reconsidered in 47th meeting of the EAC (Industry I) held on 28th-29th October, 2021 the relevant observation of the EAC meeting dated 28-29 October, 2021 is reproduced herewith for ready reference:*

“(....) The Committee, inter-alia, observed the following:

- a) *The EAC found that the response submitted by PP on additional detail sought by EAC in earlier meeting was satisfactory.*
 - b) *The EAC also deliberated on the certified compliance report of RO, written submissions, public hearing and found it satisfactory.*
 - c) *The Committee noted that EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environment concerns and the projected scenario for all the environment components. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.”*
- v. *That based upon the recommendations of the EAC, the Answering respondent had granted the Environment Clearance (EC) on 22.04.2022 for Expansion of Aluminium Smelter production capacity from 5.75 LTPA to 10.85 LTPA by M/S BALCO located at Risda Village, Korba Tehsil, Korba District, Chhattisgarh, as per the provisions of the EIA Notification, 2006 (as amended) subject to compliance of specific and general conditions. As per the condition mentioned in the EC, the Clearance does not tantamount/ construe to approvals/ consent permission etc., required to obtained or standards/ conditions to be followed under any other Acts/Rules/Subordinate legislations, etc as may be applicable to the project.”*

8. Respondent no. 2, CECB has filed the reply to the fact that :-

1. *That, the Regional Office of the answering respondent at District-Korba visited the premises of Respondent no. 3 on 26.08.2022 and inspected the storage of the hazardous waste, that is SPL (Carbon) and SPL Refractories. It was found that hazardous wastes are being properly stored and managed in covered SLF (Secured Land Fill) shades. It is also pertinent to note that no dumping of hazardous wastes outside of the industrial premises was observed during the inspection. It was also noted that Respondent no. 3 regularly provides the SPL (Carbon) to one M/s Green Mac Technology for detoxification and provides the SPL Refractories to one M/s Sunraj Transport for recycling. That all the arrangements made for handling and storage of hazardous wastes were in correspondence to the*

provisions laid down under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

- 2. That the answering respondent has also verified the status of ground water of 15 villages situated within the radius of 5-10 KM of Respondent no. 3, by sending the samples collected from the handpumps and nallahs to one M/s Ultimate Envirolytical Solutions in June, 2022. The ground water analysis report clearly shows that the ground water in those 15 villages is not contaminated at all and the contention of the appellant about water of Dengur Nallah and Lalghat being contaminated is false and baseless. That, the water analysis carried out by the answering respondent on the water samples collected from Dengur Nallah and Belgiri Nallah, BALCO Township for the Month of June, 2022 and July 2022 also clearly show that there is no water contamination, as results of the various contaminants in within the prescribed standards.*
- 3. That, Respondent No. 3 vide Online Application No. 8423810 dated 13.10.2021 applied for Consent to Establish (hereinafter referred to as "CTE") for the Expansion of Aluminium Smelter from 5.75 LTPA to 10.85 LTPA. It is pertinent to note that after examining the application of Respondent No.3 and EC issued by Respondent no. 1, the answering respondent issued CTE in favour of Respondent No.3 vide CTE dated 28.06.2022 for Expansion of Aluminium Smelter from 5.75 LTPA to 10.85 LTPA.*
- 4. That the answering respondent received letter no. BALCO/Sm-5.1(A-01)/ENVT/2020/54 from Respondent no. 3 to conduct public-hearing for Expansion of Aluminium Smelter from 5.75 LTPA to 10.85 LTPA and in correspondence to the same, the answering respondent vide letter dated 03.03.2020 directed Regional Officer, CEGB, Korba District to publish the announcement for public-hearing for Expansion of Aluminium Smelter from 5.75 LTPA to 10.85 LTPA.*

It is also pertinent to note that the answering respondent vide letter dated 16.03.2021, sent all the proceedings of public- hearing and other relevant documents to Respondent No.1 in original.

5. That the Respondent No. 3 was granted EC by Respondent no. 1 vide EC dated 04.08.2007 for the 1200 MW power plant and has allowed the construction of Ash Dyke for the said power plant under condition no. (x) of the EC. It is also pertinent to note that the Appellant has challenged EC dated 24.04.2022 and the issue of Fly Ash was enumerated in EC dated 04.08.2007, thus the same is not appealable under the present appeal.

6. That one Nav Astha Jan Vikas Seva Samiti which is a registered Non-Government Organisation (NGO) registered on 07.04.2005 at Raipur, Chhattisgarh, under Registered Societies Act, 1973 carried out an inspection of plantation carried out by Respondent No. 4 at BALCO Nagar, District Korba in March, 2021. It is pertinent to note that in its Report, Nav Astha Jan Vikas Seva Samiti compiled the data of plantation carried out by Respondent No. 4 since 2002 to 2021, and observed that Respondent No. 4, at; {(a) Integrated Aluminium and Power Complex; (b) Township; (c) Ash Pond} and {BALCO 270 MW Power Plant} has carried out total plantation in 575 acres and 65 acres respectively. That the Report also observed that Sapling Survival Percentage in the areas where Plantation was carried out by BALCO is 80.10% and the Project of Plantation carried out by Respondent No. 4 has been graded at a scale of 8.1/10 by Nav Astha Jan Vikas Seva Samiti in its Report. A copy of Inspection Report carried out by Nav Astha Jan Vikas Seva Samiti in March, 2021.

9. The submission of respondent no. 3 BALCO are that:-

1. Respondent No. 3 (BALCO) is a company registered under the Companies Act, 1956 and runs its Thermal Power Plant units of 540

MW and 1200 MW in District Korba. BALCO was originally established by the Government of India, Ministry of Mines and was a Central Public Sector Undertaking. In 2001, the Government of India disinvested 51% of its equity to Sterlite Industries (India) Limited (now Vedanta Limited). However, Ministry of Mines, Government of India still holds 49% of equity in BALCO.

2. Apart from catering to the power needs of the smelter operations of BALCO, the said units are also serving public interest in as much as the power is also being supplied to the State Governments of Chhattisgarh, Tamil Nadu and Kerala under long-term PPAs respectively. BALCO is currently supplying approximately 55MW of electricity to the State of Chhattisgarh and has also supplied electricity to many other States in the country.
3. BALCO is one of the largest Aluminium Producers in India – with 5.75 lakh tonne per annum production capacity, BALCO produces approximately 15% of the total aluminium produced in the country. BALCO is a highly valued and one of the largest stakeholders in the State of Chhattisgarh producing ingots, Alloy ingots, wire-rods, busbars and rolled products. The Smelter plants are being supported by uninterrupted power supply through the Captive Power Plant (CPP) Units of the 1200 MW unit and 540 MW Power Plant at the smelter site.
4. The Public hearing of the Expansion project ‘to increase the aluminium smelter capacity from 5.75 LTPA to 10.85 LTPA’ was successfully conducted on 17.02.2021 by RO, CECB and Collectorate, Korba as per EIA, Notification, 2006 and the proceedings of the same have been forwarded to MoEF & CC by CECB. The public hearing was held at Dr. Ambedkar Stadium, Balco Nagar, adhering to COVID 19 guidelines provided by MOEF & CC. Regional public representatives and local citizens have strongly supported the proposed smelter capacity expansion project for increasing the aluminium production capacity of BALCO.
5. BALCO has applied for EC for expansion project through proposal no IA/CG/IND/2536/2007 dated 20.09.2021. The said proposal has been considered by the Reconstituted EAC in its 45th meeting held on 28th - 29th September, 2021 and was 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.

6. *After a detailed scrutiny of all the data and documents submitted by the Answering Respondent the MoEF & CC granted the Environment Clearance (EC) 22.04.2022 for expansion project of BALCO from 5.75 LTPA to 10.85 LTPA.*

10. We have heard the Learned Counsel for the parties and perused the record. The first contention as raised by the appellant is that there is irregularity in the public hearing held on 17.02.2021. In reply thereof the learned counsel for the respondent has argued that repeated appeals are filed against the management of BALCO for unlawful gains, which was highly motivated, baseless, fundamentally flawed and intended to be motivated by certain ideologies.
11. The Appellant was a participant who extended his support in granting of Environmental Clearance to BALCO in the public hearing held on 17.02.2021. A total of 500 people attended the said public hearing out of which less than 40 people objected to the expansion of BALCO in the public hearing. The Appellant in fact extended his support to the expansion project of the Answering Respondent right from its inception by recommending to the Union Minister, Ministry of Consumer Affairs, Food and Distribution, New Delhi that in principle approval may be given to the Smelter expansion project of BALCO. A copy of the list of attendees alongwith the Minutes of meeting of the public hearing dated 17.02.2021 is annexed as Annexure-R1. Further, the Appellant vide letter dated 19.04.2022 written to the Union Minister, Ministry of Consumer Affairs, Food and Distribution, New Delhi, recommended that in principle approval may be given to the Smelter expansion project of BALCO.
12. The proceeding of the public hearing prepared by the Executive Officer/Additional Collector and the Regional Officer, PCB has been enclosed as annexure R-1 which discloses that public hearing was done in accordance with the procedure as laid down in the environmental rules and there are number of participants who participated in the proceedings and the proper hearing was done by the authorities concerned.

13. Before granting the environmental clearance the contentions, grounds and objections raised by the appellant in the present appeal has already been dealt with by the MoEF&CC.
14. The issues of noise pollution from Chimney, location, green belt have already been dealt incase *Rajesh Kumar Sethi vs. MoEF&CC & Ors.* in Appeal No. 06/2015 dated 08.09.2016, which has been finalized by the Hon'ble Supreme Court of India in Civil Appeal Diary No. 6923/2018.
15. The relevant points which were considered are as follows :-

1. "Green Belt Development

- *As directed by the Tribunal a Chart comprising of the detail of species, tree density, present height & height they will achieve in future has also been prepared.*
- *As regards the plantation done with respect to 2300 sapplings, a survival certificate, on 02.09.2025, has been issued by Chhattisgarh Van Vikas Nigam.*
- *DFO has filed its reply along with the report of inspection. Reply clearly states " Plantation has been largely undergone by the project proponent"*
- *Area of plantation has been already done in 67.91 acres of the 119 acres.*
- *Balance plantation will be completed by plantation year 2016.*
- *Progress Report of plantation done by BALCO has been duly intimated to Regional Officer, CECB by BALCO vide its letter dated 09.09.2015.*

2. 100 Meters Green Belt:

- *Map clearly shows space constraint.*
- *Contemplating on alternative plantation, undertaking given on 12.01.2015.*
- *Letter to CECB regarding amendment of the CTO & CTE condition already sent.*

(Laser Resort: disclose about appointment of NEERI)

3. Ash Dyke:

- *Modern eco friendly technology used in construction of the 1200 MW plant.*
- *Results into low emission level and less pollution.*

- *Two 275 meters chimneys were constructed with modern technology which control the emission level.*
- *Dispose of the ash is through high concentration slurry system in its ash dyke, no chance of dust pollution.*
- *As regards plantation, it is possible only to the east side of the ash dyke (approximately 12 acres) in which the plantation is going on. The other sides of ash pond are covered with either water bodies, paddy fields or tribal land, where plantation is not possible.*
- *Plantation of trees very close to the pond is dangerous and may hamper the stability of the dyke. Roots of the trees may interfere with the base.*
- *70dB(A) Awaiting CECB report.*
- *As per EC, CTE & CTO the noise level limits are 70 dB(A) during night and 75 dB(A) during day time.*
- *Noise level is anyway below limit. Problem area is Shanti Nagar. Balco is acquiring as per the tri-partie agreement.*

4. Expiry of validity of CTO dated 14.01.2015

- *CTO conditions: the CTO is for three months from the date of Boiler Light-up and Synchronization.*
- *Commercial date of operation (COD) on 11.07.2015 and the validity of the CTO is to be counted from 11.07.2015 and valid till 10.10.2015.*
- *CECB vide letter 22.09.2015 confirmed validity till 10.10.2015.*

5. Public Purpose

- *Supply to Chhattisgarh State Power Trading Company Ltd. Supply to commence from October, 2015.*
- *To TamilNadu State – 200 MW as per long term PPA dated 23.08.2013 for 100 MW and addendum dated 10.12.2013 to PPA dated 23.08.2013 for additional 100 MW.”*

16. Another point as raised by the learned counsel for the appellant is that in the EC issued on the subject name of project was “Aluminium Smelter Plant and Captive Power Plant”, but in public hearing and in EIA, establishment of 300MW captive power plant was not mentioned. It is submitted that the project name does mention 300MW because this is a clubbed EC which includes earlier capacity as well as enhanced capacity. BALCO was granted an EC for “Expansion of Aluminium Smelter Plant (from 3.5 to 9LTPA) and

Captive Power Plant (300 MW) at Korba, Chhattisgarh” on 16.09.2008. Through this current EC dated 22.04.2022, no new power plant is being installed by the answering Respondent.

17. We have gone through the Environment Clearance impugned dated 22.04.2022 which discloses that the proposal for want of Environment Clearance (EC) to the proposed project activity under the provision of EIA Notification, 2006 was considered by the EAC (Industry-I) in its 45th meeting held on 28th – 29th September, 2021 and 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 the meeting and all the project documents are available on Parivesh portal which can be accessed at <https://parivesh.nic.in>.

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.	Particular	Details
a)	<i>Terms of Reference for undertaking EIA study</i>	<i>19/09/2017</i>
b)	<i>Period of baseline data collection</i>	<i>1st December 2019 to 29th February 2020</i>
c)	<i>Date of Public consultation</i>	<i>17/02/2021</i>
d)	<i>Action plan to address the PH issues</i>	<i>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 I</i>
e)	<i>Location of the project</i>	<i>Risda Village, Korba Tehsil, Korba District,</i>

f)	Latitude and Longitude of the project site.	<p>BALCO Complex</p> <p>a) Latitude: 22°23'25.49"N to 22°24'11.57"N</p> <p>b) Longitude: 82°43'33.55"E to 82°44'58.01"E</p> <p>Township</p> <p>a) Latitude: 22°24'11.29"N to 22°24'47.39"N</p> <p>b) Longitude: 82°44'47.70"E to 82°46'22.52"E</p> <p>Ash Pond</p> <p>a) Latitude: 22°24'22.79"N to 22°24'50.21"N</p> <p>b) Longitude: 82°43'43.18"E to 82°44'54.78"E</p> <p>Proposed Aluminium Smelter Plant:</p> <p>a) Latitude: 22°23'24.5"N to 22°23'49.4"N</p> <p>b) Longitude: 82°43'32.9"E to 82°44'09.5"E</p>
g)	Total land	Total land: 109,9.91 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.
ii.	Elevation of the project site	295 m - 300 m above MSL
iii.	Involvement of Forest land if any.	No Forest Land is involved
iv.	Water body exists within the project site as well as study area	Project Site: Nil Study Area: » Belgari nala (0.1 km, NW) » Dhengu nala (0.1 km, S) • Hasdeo river (1.5 km. NW)
v.	Existence of ESZ / ESA / national park / wildlife Sanctuary / biosphere Reserve / tiger reserve / elephant reserve etc. if any within the study area	Nil.
vi.	Project cost	INR 6387 Crores
vii.	EMP cost	INR 712.78 Crores (Capital Cost) INR 47.28 Crores (Recurring Cost)
viii.	Employment opportunity	1050 nos. (Direct) and 4000 nos. (indirect-contractual)

ix.	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)
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Unit Configuration & capacity

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

5. The EAC (Industry-I) in its 2nd meeting held on 22-23 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 Aluminum Company Limited (BALCO) under the provisions of EIA Notification, 2006 subject to the following specific conditions and general conditions.”

18. The Environment Clearance was granted with following specific conditions :-

1. “Specific Conditions :

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 ve CECB &Ors) in Hon’ble High Court of Chhattisgarh.

2. 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.

3. *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.*
4. *SO₂ and NO_x emissions shall be controlled by replacing Furnance 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.*
5. *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.*
6. *Total water requirement for the existing and expansion project shall not exceed 4900 KLD.*
7. *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.*
8. *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.*

a) General Conditions:

I. Statutory compliance:

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 approval / 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 cad 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 recognized 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 recognized 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 collections 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.*
- 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 rooftops 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

- 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. NO_x (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 / intonation/ 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.”*

19. In view of the above the points as raised with regard to the Captive Power Plant was discussed and no new power plant was installed the committee considered of expansion of Aluminum Smelter Plant from 3.5 to 9 LTPA.

20. Third ground as raised by the learned counsel for the appellant is that prior permission before applying Consent To Establish (CTE) was not received from the town and country planning and Nagar Nigam, Korba by the respondent. In reply thereof it has been submitted that :-

“11. That the Town & Country Planning Department’s approval was duly obtained by the Respondent No. 3 (BALCO) before

construction of the cooling towers. It is further submitted that the CTE and CTO could not have been granted if BALCO did not have a valid Town & Country planning permission.”

21. The resources/land requirement has been considered by the EIA as follows :-

“Resource Requirement

• **Land Requirement**

The existing BALCO integrated smelter complex area is 383.96 ha, land required for the proposed smelter expansion is about 39.66 ha and is part of 383.96 ha (948 acres) of integrated aluminium complex. As the expansion will be brought in the existing premises, there will not be any additional land acquisition for this expansion.

• **Water Requirement & its Source**

For the existing aluminium Smelter 2,500 m³/day (1,500 m³/day fresh water and 1000 m³/day recycled water from ETP). For TPP water requirement is about 75,100 m³/day. Water is drawn from Hasdeo river.

For the proposed aluminium smelter the water requirement is about 2,400 m³/day (1,400 m³/day fresh water and 1000 m³/day recycled water from ETP). Water requirement will be met with from the existing allocation of Hasdeo river and by enhancing utilization of recycled water. After expansion water requirement for smelter is about 4,900 m³/day.”

22. The issue regarding the Town & Country Planning permission for 540 MW power plant is subjudice before the Hon’ble Chhattisgarh High Court in WP (PIL) No. 87 of 2020 and as well as before the Hon’ble Supreme Court in the case titled as Sarthak vs. Union of India & Ors. Writ Petition No. 469 of 2005. It is argued that there is no tree cutting in the BALCO premises as has been alleged by the Appellant. The veracity of the tree cutting pictures is highly questionable and the Appellant may be put to strict proof for the same. The Appellant has not submitted any proof of the fact that there is tree cutting

inside BALCO's premises. Furthermore, there are no Geo-tagged photos to prove that the photographs of tree cutting are from inside the BALCO's plant.

23. That BALCO has only awarded the Letter of Award (LOIA) to the Respondent No. 4 for the proposed work. The said LOA is also available on the website of the Respondent No. 4. The letters issued by the Respondent No. 4 (attached as Annexure in the appeal) are not in BALCO's domain. The Environment Impact Assessment (EIA) Report dated August 2021 (which is recognized by MoEF & CC) clearly states that the area being used for the expansion project by the answering Respondent is 98 acres only and not 122 acres as has been wrongly alleged by the Appellant to deliberately mislead this Tribunal.
24. That no land allocation for SPL safe pit has been allocated in the land use data submitted by BALCO. It is submitted that the details of SPL land allocation are not present in the land use details presented in the EC dated 22.04.2022 because no new land is being allocated for the same. The present Spent Pot Line (SPL) is being stored in secured landfill (SLF) and sheds with concrete floor which is in line with the Hazardous Waste Management & Handling Rules. The design and drawing of the SLF is approved by CECB.
25. That BALCO disposes off fly ash through proper ash management system and there is no substantial proof of dumping of Ash made in the application. BALCO has its own FLY ASH MANAGEMENT SYSTEM which takes care of disposal of fly ash. The Fly ash is used to fill the low-level areas and for making of fly ash bricks and for road widening as well. The Fly Ash generated from BALCO's plant is sent to BALCO's Ash Dykes while some quantity is directly sent to Cement Plants and Brick Manufacturing Plants. The ash transportation from plant to dykes is done through High Concentration Slurry Disposal (HCDS) System. From the ash dykes, the fly ash is utilized through various avenues such as mine void filling, infrastructure projects run by NHAI & CGPWD (CG Public Works Dept.) and reclamation of low-lying areas.
26. BALCO has a total area of 1099.91 Hectares out of which only 805.54 Hectares is in possession of BALCO. It is submitted that at present BALCO

has 291.79 Hectares (241 acres) of green cover as per the National Remote Sensing Centre (NRSC). If only the land in BALCO's possession is considered, then the present green cover amounts to 36.22% (3.22% more than the requirement under law) of the land area in BALCO's possession i.e., 805.54 Hectares. However, on 29.10.2021 BALCO vide a letter to MoEF & CC submitted its action plan to achieve 33% of green area development as per the total land area belonging to BALCO i.e., 1099.91 Hectares. The total green area requirement of 33% amounts to 363.28 hectares which shall be achieved by the end of FY2023-24 by planting trees like Karanj, Neem, Peepal, Sal, Sarai, Arjun, Sagon, Banyan, Sisoo, Rain tree, Gulmohar, Mahua, Kadam etc.

27. The detailed plans were submitted for management of project's impact on air, water and solid wastes which also forms part of the EIA report. Based upon the said comprehensive study and analysis of all the data and documents submitted by the Answering Respondent, the EC dated 22.04.2022 was granted by the MoEF & CC.

28. Similar matter was raised in Original Application No. 188/2022 titled *Dr. Anil Kumar Vs. State of Chhattisgarh & Ors.*, before Principal Bench of this Tribunal, and this Tribunal vide order dated 14.07.2022 held as follows :-

"3. Report of the joint Committee dated 29.06.2022 has been filed after undertaking visit to the site. Compliance status has been mentioned in the report. The Committee has found that BALCO has stopped production of alumina since September, 2009. Red mud already generated has been stored in red mud ponds as per EC conditions. No illegal dumping of red mud is taking place. Ground water meets the norms. There was no complaint of soil degradation. Ambient Air Quality is also as per norms. Stack emission monitoring mechanism is set up. SO₂ norms exceed prescribed limits for which FGD is to be installed by 31.12.2023. Fly ash disposal is taking place in low lying areas. Dyke plantation has commenced. The Committee has recommended requisite plantation, liquidating the legacy fly ash/more piezometers around fly ash dykes and monitoring of fluoride emissions. Relevant extracts from the reports are:-

“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	Zong	Source	Date of Collection
1	Korba	Village- Parasabhatha	22. 4053	82. 7357	Hand Pump	01-06-22
2	Korba	Village—Rogbahari	22.42 19	82. 7443	Hand Pump	01-06-22
3	Korba	Belgirinallha up strem	22.4092	82.7575	Nalla	01-06-22
4	Korba	Belgirinallha up strem	22.3998	82. 7119	Nalla	02-06-22
5	Korba	Dengurnallhodown Stream	22.3777	82. 7278	Nalla	02-06-22
6	Korba	Lalghai	22.3896	82.7457	Hand Pump	02-06-22
7	Korba	Dengurnallhoup stream	22.3858	82.7510	Nalla	02-06-22
8	Korba	Village- Snihobhatha	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 streme near Urga Village, 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- Dumnr dih	22. 4067	82. 7892	Hand Pump	02-06-22

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

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
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.*

1. 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**).*

2. Information from State Health Department

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

3. 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).

4. 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 indicated 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 HCSD 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)

Powr Plant	2019-20		2020-21		2021-22	
	Generati on	Utilization	Generation	Utilization	Generatio n	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 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.
- 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.)	Permiss on LetterNo. and Date	Permitt ed Quantit y 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	20,00,000 MT	Approved Quantity is dumped & soil covering has been done
2	M/s Balco Aluminium Company Limited, 540+1200 MWTPP, 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,	Ltr.No.- 1517 dated – 23/02/2021	1,15,000 MT	Approved quantity is dumped & soil covering has been done

					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- 12.589Hect..			
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- 0.756Hect.	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- 3.914Hect.	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, 1191/1k, 1191/3, 1206, 1194/2, 1195/1, 1112/3, 1070/17 Total Rakba – 8.87 Acre and Khasra No. 1031, 1102/6 1158/4, 1162/1?k, 1159/4, 1161/1/d2, 1162/1B, 1162/1?k, 1121, 1190/1, 1190/2, 1191/4, 1194/1,	Ltr.No.-622 dated – 21/10/2021	3,00,000 MT	Approved Quantity is dumped & soil covering has been done

					1196/4,1162/1 =, 1119/2, 1119/5, 116/7/1, 1167/2, 1070/19,1070/ 20,1070/2 1,1070/23, 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 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 FY 24 (in ha)			Total Green Cover (in ha)	Total Green Cover (in %)	Species Proposed
				FY 22	FY23	FY24			
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, PM2.5, 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.”

29. Latest report with regard to the pH and BOD dated 26.07.2022 are as follows :-

Sr. No	Characteristics	Unit	Result (1)	Result (2)	Result (3)
A – PHYSICAL PARAMETERS					
1	Temperature	°C	26.3	26.3	
2	Appearance	-	Turbid	Turbid	
3	Odour	Theshold No.	OL	OL	
4	pH	pH Units	7.11	7.13	
5	Turbidity	N.T.U./JTU	-	-	
6	Conductivity	US/CM	-	-	
7	Total Solids (T.S.)	Mg/L	220	228	
8	Dissolved Solids (D.S.)	Mg/L	148	154	
9	Suspended Solids (S.S.)	Mg/L	72.0	74.0	
10	Fixed Dissolved Solids (F. D.S.)	Mg/L	-	-	
11	Ammonical Nitrogen (as NH ₄ -N)	Mg/L	-	-	
12	Nitrite Nitrogen (as NO ₂ -N)	Mg/L	-	-	
13	Nitrate (as NO ₃)	Mg/L	-	-	
14	Phosphate (as PO ₄)	Mg/L	0.5	0.5	
15	Chloride (as Cl)	Mg/L	22.0	25.0	
16	Sulphate (as SO ₄)	Mg/L	13.0	14.0	
17	Dissolved Oxygen (D.O.)	Mg/L	-	-	
18	B.O.D. (3 days, 27 °C)	Mg/L	2.6	3.0	
19	C.O.D.	Mg/L	32.0	34.0	
20	Total Alkalinity	Mg/L	62.0	66.0	
21	Total Hardness	Mg/L	58.0	60.0	
22	Calcium Hardness	Mg/L	24.0	28.0	
23	Magnesium Hardness	Mg/L	34.0	32.0	
24	Feacal Coliform	MPN/ 100ml	-	-	
25	Total Coliform	MPN/ 100ml	-	-	
26	Sodium	Mg/L	-	-	
27	Potassium	Mg/L	-	-	
S= Slight, H= Highly, B= Blackish, t= Turbid, O.L.= Odur Less, Unpl.= Unpleasant, S. Smell= Slight Smell					
Remarks : Indicates Exceeding the Prescribed Limits					

Sr. No	Characteristics	Unit	Result (1)	Result (2)	Result (3)
A – PHYSICAL PARAMETERS					
1	Temperature	°C	26.4	26.4	
2	Appearance	-	S.T.	S.T.	
3	Odour	Theshold No.	OL	OL	
4	pH	pH Units	7.01	7.08	
5	Turbidity	N.T.U./JTU	-	-	
6	Conductivity	US/CM	-	-	
7	Total Solids (T.S.)	Mg/L	198	210	
8	Dissolved Solids (D.S.)	Mg/L	131	138	
9	Suspended Solids (S.S.)	Mg/L	67.0	72.0	
10	Fixed Dissolved Solids (F. D.S.)	Mg/L	-	-	
11	Ammonical Nitrogen (as NH ₄ -N)	Mg/L	-	-	
12	Nitrite Nitrogen (as NO ₂ -N)	Mg/L	-	-	
13	Nitrate (as NO ₃)	Mg/L	-	-	
14	Phosphate (as PO ₄)	Mg/L	0.6	0.7	
15	Chloride (as Cl)	Mg/L	18.0	20.0	
16	Sulphate (as SO ₄)	Mg/L	10.0	12.0	
17	Dissolved Oxygen (D.O.)	Mg/L	-	-	
18	B.O.D. (3 days, 27 °C)	Mg/L	2.4	2.6	
19	C.O.D.	Mg/L	24.0	28.0	
20	Total Alkalinity	Mg/L	56.0	62.0	
21	Total Hardness	Mg/L	52.0	54.0	
22	Calcium Hardness	Mg/L	20.0	24.0	
23	Magnesium Hardness	Mg/L	32.0	30.0	
24	Feacal Coliform	MPN/ 100m l	-	-	
25	Total Coliform	MPN/ 100m l	-	-	
26	Sodium	Mg/L	-	-	
27	Potassium	Mg/L	-	-	
S= Slight, H= Highly, B= Blackish, t= Turbid, O.L.= Odur Less, Unpl.= Unpleasant, S. Smell= Slight Smell					
Remarks : Indicates Exceeding the Prescribed Limits					

30. The Chhattisgarh Environment Conservation Board (CECB) vide letter no. 2207/TS/CECB/2022 Nava Raipur Atal Nagar dated 28.06.2022 has issued permission under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 for expansion of Aluminium Smelter from 5.75 LTPA to 10.85 LTPA in the existing premises, which is M/s Bharat Aluminum Company Limited at Village – Risda, Tehsil & District – Korba (C.G.) subject to following terms and conditions :-

1. *“Industry shall comply with all the terms and conditions of Environmental Clearance issued by Ministry of Environment, Forest and Climate Change, Government of India, New Delhi vide EC Identification No. EC22A008CG177331, File no. J-11011/123/2007-IA.II(I), dated: 22/04/2022.*
2. *Industry 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.*
3. *Industry shall provide adequate facility for proper treatment of industrial and domestic effluent and shall ensure that the treated effluent quality meet the standards prescribed by Board published in Gazette Notification dated 25.03.88. No effluent shall be discharged outside of the factory premises in any circumstance. Industry shall provide effluent treatment plant (ETP) and Sewage Treatment Plant (STP) of adequate capacity and efficiency to achieve the desired treated effluent standards. The units of effluent treatment plant and effluent treatment plant area shall have adequate acid proof lining. Domestic effluent shall be treated in sewage treatment plant. Treated effluent shall be utilized either in process or for plantation within premises. Industry shall make arrangement of suitable drains/pipe networks to ensure adequate flow for full utilization of treated effluent inside the premises. No effluent shall be discharged out of premises under any circumstances. The major parameters of treated effluent shall not exceed the following limits: -*

S. No.	Parameters	Limits
1	<i>pH</i>	<i>5.5 - 9.0</i>
2	<i>Suspended Solids</i>	<i>100 Milligram per Liter</i>
3	<i>BOD</i>	<i>30 Milligram per Liter</i>
4	<i>COD</i>	<i>250 Milligram per Liter</i>
5	<i>Oil and Grease</i>	<i>10 Milligram per Liter</i>

4. *Chhattisgarh Environment Conservation Board may further stipulate stringent limit depending upon environmental conditions. Industry shall install online EQMS at outlet of ETPs & STPs and PTZ Cameras with online connectivity at out lets of*

premises. Real time data of EQMS shall be made available in CECB/CPCB Server.

5. Closed cycle cooling system shall be provided. Minimum water for makeup purposes shall be ensured. Industry shall provide adequate measuring arrangements for the measurement of water utilized in different categories and effluent generated before commissioning of the plant. Industry shall use treated effluent for make-up of cooling water as maximum as possible.”

31. In view of the above submissions things are settled and proper expert appraisal was conducted for expansion of Aluminum Smelter Plant and there is a proper provision of compliance of environmental conditions.

32. In light of above discussion, we are of the view that necessary directions have been issued by the Principal Bench of this Tribunal by dealing with the matter in original application no. 188/2022 *Dr. Anil Kumar Vs. State of Chhattisgarh & Ors.* which are as under:-

“4. In view of above, further remedial action be taken in terms of recommendations. Safety measures be taken for the dyke and preventing air pollution, liquidating legacy ash stock, conducting risk assessment of all ponds, timely installation of FGD and complying norms of 502 emissions. Though red mud is reported to have been stored in fly ash ponds in terms of the EC conditions, steps should be taken for its stabilization. Since there do not appear to be any guidelines on the subject, we direct CPCB to lay down appropriate guidelines on stabilization of red mud within one month. The same be served on the PP and its copy forwarded to the Registrar General of this Tribunal by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF. The PP may ensure strict compliance of the guidelines which may be overseen by the State PCB.”

33. We reiterate that the directions issued as above must be strictly complied with and in-case of non-compliance CECB is directed to take necessary actions in accordance with law and in view of the guidelines and directions issued by the Principal Bench of this Tribunal, noted above. With these observations the **Appeal No. 12/2022** stands **disposed of** accordingly.

Sheo Kumar Singh, JM

Dr. Arun Kumar Verma, EM

14th November, 2022
Appeal No. 12/2022(CZ)
PN