

SPEED POST

No. CPCB/IPC-II/HIL-Muri/2018-19/

17/12/2018

To,
Shri N. N. Roy,
Joint President & Unit Head,
M/s Hindalco Industries Limited,
Muri Works, Chotamuri-835101,
Dist. Ranchi,
JHARKHAND

Sub.: Directions under Section 5 of the Environment (Protection) Act, 1986 – Show Cause Notice thereof.

WHEREAS, the Ministry of Environment & Forests, Govt. of India, vide notification S.O.157(E) of 27/02/1996 has delegated powers vested under Section 5 of the Environment (Protection) Act, 1986 (29 of 1986) to the Chairman, Central Pollution Control Board (CPCB), to issue direction to any industry, Municipal Corporation, Municipal Council, Cantonment Board to any local or other Authority for the violation of emission and effluent standards notified under the Environment (Protection) Rules, 1986 and amendments thereof;

WHEREAS, a team of officers from the Eastern Zonal Office, CPCB, Kolkata carried out inspection and monitoring of M/s Hindalco Industries Limited, Muri Works (the unit) on February 21, 2012 under the ESS scheme and found the unit violating provisions of the applicable rules/standards notified under the Environment (Protection) Act, 1986;

WHEREAS, based on the observations and in exercise of the powers vested under Section 5 of the Environment (Protection) Act, 1986, CPCB issued a 'show-cause notice-cum-direction' vide letter no. CPCB/PCI-II/Dir/2012/11328, dated 01/01/2013, specifying the following directions for compliance regarding Red Mud Management & Handling:

- (1) The unit shall submit time-bound action plan for constructing a new red mud pond (RMP) for management and handling of red mud including strengthening of the bund of existing RMPs. The strength analysis of the embankments of existing RMPs shall be got conducted by any of the reputed institutions like IITs or other central research institutes and action taken as required to prevent any breach.
- (2) The unit shall ensure no overflow or breach of RMP#4 on account of excess loading of red mud and shall submit an undertaking affidavit to CPCB to this effect.
- (3) The unit shall submit a time-bound plan for ensuring compliance of the above directions within 30 days along with a Bank guarantee of Rs. 10.00 lakhs with a validity period of one year to ensure compliance of the above.

WHEREAS, the unit in reply to the above show-cause notice vide their letter no. UHO/TC/2013/002, dated 30/01/2013, provided the following information (reproduced briefly):

- (a) With reference to the direction no. 1, the unit submitted action plan for strengthening & augmenting the existing RMP#4 by engaging CBRI. However, the industry did not mention anything about construction of a new RMP as directed by CPCB.

- (b) With reference to the direction no. 2, the unit submitted the undertaking affidavit, ensuring no overflow or breach of RMP#4 on account of excess loading of red mud.
- (c) The industry initially requested for waving off Rs. 10.00 lakh bank guarantee (BG). However, the unit subsequently submitted the BG no. 1301351BF00032 for the same amount vide letter no. UHO/TC/2013/003, dated February 11, 2013.

WHEREAS, after reviewing the information provided in the above reply and taking serious note of the unit proposing no action plan for construction of a new RMP, CPCB informed the unit vide letter no. B-34013/11/2012/PCI-II/12158, dated March 21, 2014, to take following actions:

- (1) Provide time-bound action plan for construction of a new RMP.
- (2) Our site report amply highlights the constraints and risks associated to prolonged use of RMP#4. Your scale of red mud generation and the fast dwindling dump area of RMP#4 hardly provide any leeway, both technically and physically, for carrying out any stressful experimentation or modification of the said RMP. Cautioning you on this, we recommend not to initiate any modification/work of RMP#4 without consent or clearance of concerned State Pollution Control Board.
- (3) The Bank Guarantee BC-1301351BGF00032 of 10 lacs stands expired w.e.f. 31/01/2014. You are requested to extend the validity of the BG for one year subject to the same terms and conditions as before.

WHEREAS, in reply to the above, the industry filed the following submissions (reproduced briefly) vide letter no. HIL/ENV/2014/01, dated 04/04/2014:

- (a) The industry informed to continue using the existing RMP#4 after strengthening, modification and augmentation of its holding capacity by initiating measures as per the recommendations of CBRI, the expert agency engaged for this work, as well as using red mud filter press. The unit mentioned about the challenges being faced by the industry in acquiring additional land for construction of new RMP. The unit also informed about supplying red mud @ 1500 ton/month to the nearby ACC cement plant. However, no plan for construction of a new RMP was proposed.
- (b) Provided the plan indicating various measures for the existing RMP#4.
- (c) The validity of the BG has been extended up to 30/04/2015.

WHEREAS, CPCB subsequently carried out inspection-cum-monitoring of the unit on 20/08/2014, wherein CPCB inspection team verified the compliance status with regard to the directions issued through show-cause notice dated 01/01/2013;

WHEREAS, the observations made by CPCB team during the compliance verification inspection on 20/08/2014, revealed that the plant was yet to comply with the requirement of construction of a new RMP;

WHEREAS, based on the findings of the aforesaid inspection, CPCB once again issued a 'show-cause notice' as to why the plant shall not be closed down until a new RMP is constructed vide letter no. CPCB/PCI-II/ESS/HIL-Muri/2015/7511, dated 27/02/2015;

WHEREAS, the industry in response to the aforesaid 'show-cause notice' submitted its detailed reply vide letters dated 20/03/2015, 30/03/2015, 31/03/2015, 06/04/2015 & 20/04/2015, making the following submissions (in brief):

'The industry had initiated the process of acquiring additional land, identified the land & negotiated with the land owners, however, due to various reasons some owners did not agree and therefore the unit had to phase out the exercise. The industry requested CPCB for not insisting on additional land as immediate requirement as the storage of red mud will be taken care of for another 8-10 years (i.e. till 2025) (i) by implementing the filter press technology generating a filter cake with higher solids content (red mud filter press already installed & commissioned) and (ii) by enhancing the storage capacity of the existing RMP#4 by carrying out strengthening & height extension work of RMP#4 embankments as per the design/technology recommended by the Central Building Research Institute (CBRI), Roorkee and the same was also vetted/endorsed by IIT, Mumbai. Subsequently, JSPCB, vide their letter dated 01/04/2015, has accorded permission, with conditions, for capacity expansion of RMP#4 as per the design submitted by CBRI, Roorkee & recommended by IIT, Mumbai.'

WHEREAS, the industry has indicated in the red mud management/work plan that it will complete all the tasks for embankment strengthening & capacity augmentation of the RMP by Sep 2016;

WHEREAS, JSPCB vide letter No. 104/07/G816 dated 01/04/2015 has accorded permission for capacity expansion of RMP#4 as per design submitted by CBRI, Roorkee by increasing the height of dumping by additional 10 m from top of 12 m embankment.

WHEREAS, in exercise of the powers delegated to the Chairman, CPCB under section 5 of the Environment (Protection) Act, 1986, issued directions dated 25/05/2015 to M/s HIL, Muri, Jharkhand as below:

- (i) The industry shall complete all the tasks for embankment strengthening and capacity augmentation of the RMP by 30/09/2016 as per design and recommendations by CBRI, Roorkee & IIT, Mumbai, and as permitted by JSPCB vide letter dated 01/04/2015, under their supervision. The quarterly progress report of the action taken should be submitted to CPCB & Jharkhand SPCB.
- (ii) The industry shall extend the validity of the existing Bank Guarantee of Rs. 10.00 lakh upto 30/03/2017.

WHEREAS, in reply to the above, the industry submitted its Quarterly Progress Report dated 20/07/2016, wherein it requested CPCB for extension of the completion date up to 30th September, 2017 indicating ensuing rainy season stalling and hampering progress of work at their end;

WHEREAS, to take stock of actual work completed at site and assess overall compliance status of augmentation & strengthening of RMP#4, CPCB RD-(East) carried out joint inspection of the industry along with Officials of JSPCB on 28th & 29th March 2017 and submitted report to CPCB Head Office vide letter dated 12/05/2017 with the following observations regarding:

1. Adequate measures not taken to avoid spillage or discharge of highly alkaline water from the Red Mud ponds/dyke. Industry communicated that completion of work is expected by Sep 2017. 60% of work completed in the northern side of the dyke, 30 % in the west side and no work done on southern side. Progress cannot be considered satisfactory. Construction of garland drain is faulty. Gabion and reinforce soil wall in the existing embankment is not yet completed.

WTK

2. Garland drain around the dyke wall yet to be provided to collect runoff. A small holding tank is there and possibility of seepage / leakage still exists to directly drain into the river.
3. Earthen bunds for 3 RMPs towards the river were not provided. In flood like situation heavy cutting of the river cannot be avoided. In RMP #3 & 4, dyke towards the river is required and progress of work is very slow. A proper well designed garland drain to be constructed on the inner periphery of RMP #3 & 4. More trees need to be planted to prevent / minimize soil erosion.
4. RMP #2 is abandoned and no fresh dumping observed. But intermittent water sprinkling is necessary to avoid resuspension of red mud soil.
5. No comprehensive seepage collection, treatment and disposal system provided in the RMP #2 to prevent adverse impact on surrounding water and land environment.
6. No observation well installed for continuous monitoring of water quality in the vicinity of RMPs. However, CPCB team collected water samples from nearby bore-well and no adverse impact observed from analysis reports.
7. No new sites proposed/developed for disposal of red mud and it is only at the planning stage.
8. Green belt development work is initiated and some plantation observed but not visually justified as per claim of 85-90% survival rate.
9. Red mud is being continuously dispatched to ACC Cement (4090 MT/month) by rail and long-term plan needed for utilization of red mud.
10. The condition of garland drain around RMP #3 improved to take care of overflow.
11. Approval from JSPCB obtained for construction activity on river front side.

WHEREAS, based on the request made by industry vide letter dated 09/06/2017 and 29/06/2017, wherein the industry had indicated in the red mud management/work plan that it will complete all the tasks for embankment strengthening & capacity augmentation of the RMP by 30th Sep 2017, CPCB vide letter dated 17/07/2017 extended the deadline to complete the work till 30th September 2017 as below:

- (i) The industry (M/s HINDALCO Industries Limited, Muri, Jharkhand) shall complete by 30/09/2017, all the tasks for embankment strengthening & capacity augmentation of the RMP as recommended by CBRI, Roorkee & IIT, Mumbai and as permitted by JSPCB under their supervision.
- (ii) The industry shall rectify the inadequacies observed at the time of inspection by CPCB during March 28-29, 2017 by 30/09/2017.
- (iii) The industry shall submit the compliance report without fail on or before 30/09/2017.

WHEREAS, in reply to the above, the industry submitted its Quarterly Compliance Report dated 03/10/2017 wherein it was mentioned that the unit has completed RMP capacity augmentation work, as per design and drawings provided by the IIT Bombay adequately and rectified the inadequacies observed by CPCB inspection team during last visit.

WHEREAS, MoEF & CC in 2005 while granting environmental clearance for expansion project, imposed a condition for construction of new red mud pond, as the storage capacity of RMP#4 was about to be exhausted. The industry has not got amended condition of construction of new red mud imposed by MoEF & CC while granting environmental clearance for expansion project in the year 2005 which is a violation of environmental clearance.



WHEREAS, in view of the matter of very high storage of red mud by the industry raised by Member of Parliament (Lok Sabha), CPCB carried out inspection of the industry on 7th to 9th August 2018 and submitted its report with the following observations:

Red Mud Management & Handling:

1. There are 4 red mud ponds (RMPs) used for red mud disposal. RMP #1 and RMP#2 (36 acres) have been exhausted.
2. RMP#3 has total area of 41 acres, which also has been exhausted. However, a portion of RMP#3 is being used for making ramp for providing access to RMP#4 for dumping of red mud. **The height of RMP#3 is varying from 12m to 21 meters against the approved height of 12 m by JSPCB.**
3. RMP#4 has total area of 51.4 acres and is being used for dumping of red mud. As per original plan, height RMP# 4 was supposed to be 12m from ground the final height of red mud pond. The unit has strengthened the embankments of RMP#4 by constructing a Gabion of 12 meters at three sides. **The maximum dumping height of RMP#4 is about 32 meters from ground which was in violation of the permitted height of 22 meters by JSPCB.** RMP#4 is situated right on the bank of river Subarnarekha and its earthen embankment is about 4 m in height (approx.) from the bed of river.
4. A garland drain around the RMP#3 and RMP#4 has been constructed to collect seepage from RMP#3&4. The collected water is pumped to collection pit.
5. A risk assessment study may be undertaken by the industry to ensure safety and stability of red mud slope of existing and exhausted RMP# 4 & 3 and failure of gabion wall and erosion of Embankment etc.
6. The industry should undertake red mud slope stabilization and rehabilitation with suitable plantation to ensure enhanced stability and reduce dust emission during dry season.
7. A feasibility may be undertaken to explore transportation of red mud to pond by pipe conveyors.

Other Observations

1. There was no discharge from the industry into river.
2. All the decanted water from RMP is collected through garland drain and pumped back to the ETP. Where it is treated and/or used in process. Thus industry is maintaining zero discharge.
3. The water quality as monitored indicates that river water is not contaminated with the effluent from the industry.
4. The online system is also operational for the parameter BOD, COD, pH, TSS the online reading at 12.30 PM on 8/8/2018 was observed and recorded in the table. The monitored and online reading is not matching and therefore the online analysers need to be calibrated.
5. Industry has completed 85% of civil construction of storm water drain around the plant boundary as directed by CPCB vide its direction dated 20/12/2017.



6. PTZ camera should be installed at the terminal end of storm water drain before leading to river to ensure no wastewater from industry is discharged into river except rainwater.

Now therefore in view of the above and in exercise of powers vested under Section 5 of the Environment (Protection) Act, 1986 to the Chairman-CPCB, **M/s Hindalco Industries Limited, Muri Works, Chotamuri-835101, Dist. Ranchi, Jharkhand** is hereby directed to show cause within 15 days as to why its operation should not be closed down in view of the shortcomings observed, particularly for increasing the height of RMPs # 4 & 3 without necessary permission from Jharkhand SPCB and for not getting the EC amended from MoEF & CC on not complying the condition of construction of new RMP.

19/10/2013
(S.P.S Parihar)
Chairman

Copy to:

1. The Joint Secretary,
CP Division,
Ministry of Environment, Forests &
Climate Change
'Indira Paryavaran Bhavan'
Jor Bagh Road, Aliganj,
New Delhi - 110 003 : For information please.
2. The Chairman,
Jharkhand State Pollution Control
Board,
T.A Building, HEC, P.O. Dhurwa,
Ranchi-834004,
Jharkhand : For information and necessary action
please.
3. The Regional Directorate (East),
Central Pollution Control Board,
502, Southend Conclave,
1582, Rajdanga Main Road,
Kolkata-700107,
West Bengal : For information please.
4. The Divisional Head, IPC-VI,
CPCB, Delhi.
5. ✓ The Divisional Head,
IT Division, CPCB, Delhi.

Prashant Gargava
(Prashant Gargava)
Member Secretary