

SPEEDPOST

CPCB/PCI-II/ESS/HIL-Muri/2017/ 13404

07/11/2017

To

Shri Sudip Bhattacharyya, VP & Head  
M/s Hindalco Industries Limited,  
Muri Works, Chotamuri-835101,  
Dist. Ranchi,  
Jharkhand

**Sub.: Directions under Section 5 of the Environment (Protection) Act, 1986 – Closure 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:

- (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) Particulate matter (PM) emission from Boiler#1 shall be brought under control by providing adequate pollution control measures so as to keep particulate matter emission within the stipulated limit of 150 mg/Nm<sup>3</sup>.

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- (4) The unit shall submit a time-bound plan for ensuring compliance of the above directions within 30 days along with a Bank guarantee of ₹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) The unit submitted that it is carrying out its industrial activities in compliance with all applicable rules and maintaining pollution within the permissible standards/limits.
- (b) The industry claimed that monitoring of Boiler#1 by CPCB on 21/02/2012 coincided with a blackout period when the plant was not under proper control/operation.
- (c) 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.
- (d) 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.
- (e) The industry initially requested for waving off ₹ 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) You are also requested to submit original prints of your stack monitoring data for Boiler #1 for the last one month.

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- (4) 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) Submitted the stack monitoring data for Boiler#1.
- (d) 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 our 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 31/03/2015, 6/4/2015 & 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,

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Mumbai. Subsequently, JSPCB, vide their letter dated 1/4/2015, 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, 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 as recommended by CBRI, Roorkee & IIT, Mumbai and as permitted by JSPCB by 30/09/2016, 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 30<sup>th</sup> September, 2017 indicating ensuing rainy season stalling and hampering progress of work at their end;

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

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.
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.

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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. HW authorization obtained from JSPCB valid upto 31.12.2019.
12. Approval from JSPCB obtained for construction activity on river front side.
13. Online monitoring system installed at ETP and STP. Online data and lab analysis report are as under:

Parameter	ETP – Online data	ETP – Lab data	STP – Online data	STP –Lab data
pH	6.2	7.34	7.8	7.14
TSS (mg/l)	10.2	22.0	14.7	12.0
COD (mg/l)	110	20	159	18
BOD (mg/l)	6.95	4.0	7.0	< 2.5

Two more outlets observed and the seepage was traced/tracked from the industry premises draining directly into the Subarnarekha River.

14. Adequate air pollution control equipment installed including sprinklers to control fugitive emissions. ESP installed for new Power Plant. Continuous emission monitoring system installed and connected to JSPCB:

Parameter	CPP
PM (mg/Nm <sup>3</sup> )	84
SO <sub>2</sub> (mg/Nm <sup>3</sup> )	352

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15. Fly ash is disposed in abandoned mine at CCL.

16. Supplying potable water to few households and should be enhanced in near future.

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 30<sup>th</sup> Sep 2017, CPCB vide letter dated 17.07.2017 extended the deadline to complete the work till 30<sup>th</sup> September 2017 as below:

- (i) The industry (M/s HINDALCO Industries Limited, Muri, Jharkhand) shall complete all the tasks for embankment strengthening & capacity augmentation of the RMP as recommended by CBRI, Roorkee & IIT, Mumbai and as permitted by JSPCB by 30/09/2017, 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, in view of the VIP Complaint against the industry, CPCB RD-(East) carried out inspection of the industry on 5<sup>th</sup> October 2017 and submitted its report to Head Office vide letter dated 23/10/2017 with the following observations:

1. The visiting team inspected the river stretch which is adjacent to industry and found that:
  - i. Along the river of Subarn Rekha in front of Hindalco colony (North point) Seepage was observed, which is coming from the industry and polluting the river.
  - ii. The industry has constructed a pit in front of Plant gate to collect industrial effluent and pump it back to ETP but the above arrangement made by the Industry is not sufficient as it was observed that there is seepage from the pit to river Subarn Rekha which needs to be stop immediately.
  - iii. It was also observed there is by pass of effluent water from other point that is at plant gate. This effluent is also reaching to river Subarn Rekha and polluting the river.
2. The Industry has Constructed leachate collecting pits at Red Mud Pond no- 3 and at Red Mud Pond no-4. Two pumps for each leachate-collecting pit of capacity of 15m<sup>3</sup>/hr and

100m<sup>3</sup>/hr is provided. Collected leachate in a pit is pumped back to water holding area at RMP no-4.

WHEREAS, the above situation poses a serious threat to environment and it is necessary to immediately stop these serious violations.

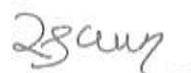
**NOW, THEREFORE**, based on the observations made by CPCB inspection team and all material facts available with CPCB and in exercise of powers vested under Section-5 of the Environment (Protection) Act, 1986 to the Chairman, M/s **Hindalco Industries Limited, Muri Works, Chotamuri, Ranchi, Jharkhand** is hereby directed to close down all operations/production with immediate effect till shortcomings observed during inspections dated 28<sup>th</sup> - 29<sup>th</sup> March, 2017 and 5<sup>th</sup> October, 2017 are fully addressed and full compliance to CPCB Directions is achieved. **After completion of the above said directions, the unit shall report to CPCB and seek permission from CPCB before resumption of operations.**

Failure to comply with above directions will attract action in accordance with the provisions of Environment Protection Act, 1986.

  
(S.P.S Parihar)  
Chairman  
wgj 08.11.2017

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
2. The Chairman  
Jharkhand State Pollution Control Board,  
T.A Building, HEC, P.O. Dhurwa,  
Ranchi-834004 : With request to ensure compliance of  
of closure Direction and when complied  
provide verification report to CPCB
3. The Regional Directorate (East)  
Central Pollution Control Board  
502, Southend Conclave, 1582  
Rajdanga Main Road,  
Kolkata-700107. : For information, please.
4. The Divisional Head, IPC-VI, CPCB, Delhi.
5. ✓ The Divisional Head, IT Division, CPCB, Delhi.

  
(A. Sudhakar)  
Member Secretary  
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