

BY REGISTERED AD

CPCB/IPC-II/AI/OMS/2017-18 2868

16/05/2017

To

The Unit Head
M/s Hindalco Industries Limited
Belagavi Works, P.B No. 1,
Belagavi-590010, Karnataka

Sub.: Modified Directions under Section-5 of the Environment (Protection) Act, 1986 regarding installation of on-line effluent and emission monitoring system- Closure thereof

Ref:

1. CPCB's direction No. CPCB/PCI-II/AI/OMS/5150, dated 23/07/2015.
2. CPCB's direction No. CPCB/PCI-II/AI/OMS/24363, dated 07/03/2017.

WHEREAS, the primary aluminium industries are identified as one of the 17 categories of highly polluting industries which have been discharging environmental pollutants directly or indirectly into the ambient air and water, having potential threat to cause adverse effect on the water and air quality; and

WHEREAS, there is need to inculcate habit of self-monitoring within the industries for complying with the prescribed standards and this can be achieved by the methods like installing online effluent and emission monitoring devices; and

WHEREAS, for strengthening the monitoring and compliance through self-regulatory mechanism, online source emission and effluent monitoring systems need to be installed and operated by the industries on 'polluter pays principle'; and

WHEREAS, a direction under section-18(1)(b) of the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 was issued on February 05, 2014 to all the State Pollution Control Boards (SPCBs)/ Pollution Control Committees (PCCs) for installation of online emission monitoring system w.r.t. PM & fluoride parameters and online effluent monitoring system w.r.t. pH, BOD, COD & TSS in aluminium industries; and

WHEREAS it was clarified that flow meter & web camera be installed in case of units with zero liquid discharge (ZLD) by March 31, 2015 vide guidelines uploaded on website of CPCB dated November 7, 2014; and

WHEREAS, considering the requests/representations received from industries/industrial associations/SPCBs/PCCs, an extension of time up to June 30, 2015 for installation of online monitoring systems was granted vide direction dated March 02, 2015 under section-18(1)(b) of the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981; and

WHEREAS, a letter vide dated May 29, 2015 was issued by the Chairman CPCB to all the SPCBs/PCCs informing that no further extension of time will be given after June 30, 2015 and withdrawal of consent to operate along with forfeiture of bank guarantee of non-complying Units will be the only option; and

WHEREAS, concerned SPCB/PCC have issued directions under section-33A of the Water (Prevention & Control of Pollution) Act, 1974 and section-31A of the Air (Prevention & Control of Pollution) Act, 1981 to install the online monitoring system by June 30, 2015 and submit bank guarantee of 100% of the cost of online emission & effluent monitoring system; and

WHEREAS, Hon'ble Supreme court of India has expressed concern regarding non implementation of direction of statutory bodies on various matters; and

WHEREAS, Hon'ble National Green Tribunal in its order dated 15th December, 2014 in the matter of Krishan Kant Singh Vs. M/s. Hindustan Cocacola Beverages Pvt. Ltd., Mehdiganj, Rajatalab, Varanasi stated that "it seems appropriate introduction of online monitoring system for the industries needs to be explored and if it is possible to provide for joint online monitoring system"; and

WHEREAS, CPCB has explored installation of Online Monitoring device in the other countries and has come to conclusion that online monitoring devices are essential for improving compliance as the conventional monitoring systems not able to capture violations on regular basis; and

WHEREAS, CPCB has held stakeholder consultations with industrial associations and SPCBs/PCCs on 06.08.2014, 19.09.2014,

29.09.2014, 08.10.2014, 16.10.2014, 09.01.2015, 08.04.2015 and 16.06.2015 regarding time bound implementation of installation of these devices; and

WHEREAS, the Ministry of Environment & Forests, Government of India, vide Notifications No. S. O. 157 (E) of 27.02.1996 and S. O. 730 (E) dated 10.07.2002, has delegated the powers vested under Section-5 of the Environment (Protection) Act, 1986 (29 of 1986) to the Chairman, Central Pollution Control Board, to issue directions to any industry or any local body or any other authority for violations of the standards and rules notified under the Environment (Protection) Rules, 1986 and amendment thereof.

WHEREAS to this effect and in exercise of powers vested under Section-5 of the Environment (Protection) Act, 1986, CPCB has served the above referred notice (CPCB/PCI-II/AI/OMS/5150) on July 23, 2015 directing the industry to comply with the following directions:

1. The Unit shall submit documentary evidence regarding status of installation of online emission & effluent monitoring system.
2. The Unit shall submit the status on connectivity for submission of online 24x7 monitoring data to SPCBs/PCCs and CPCB.
3. The Unit shall submit the details as per Annexure-I through
 - (a) E-mail id - cems.cpcb@nic.in
 - (b) uploading the data on the link provided on CPCB Website (www. cpcb.nic.in) and
 - (c) by speed post

to the Member Secretary, Central Pollution Control Board.

WHEREAS in response to the CPCB's Directions your industry sent the above referred letters dated 17/08/2015 and dated 30/09/2015 indicating that you have installed the Online Continuous Emission and Effluent Monitoring Systems (OCEMS) and hooked up the data to the CPCB servers; and

WHEREAS, the SMS alerts are supposed to be generated and sent to concerned dealing officer in CPCB as well as in plant whenever concentration of any pollutant exceeds the limit as prescribed. However, in case of M/s HIL, Belgavi Works, Karanataka large number of SMS alerts have been generated in last three months; and

WHEREAS, in order to verify the compliance and find out the status of online monitoring system, a team from CPCB, Bengaluru carried

out an inspection of M/s HIL, Belgavi Works, Karnataka on 27-28/12/2016 and important observations made during inspection are as follows:

1. M/s Hindalco Industries Ltd., Belgavi, Karnataka is an Aluminium industry established in 1970 with production capacity of alumina (587 KTPA), aluminium (73 KTPA), Sodium Vanadate (120 MTPA), Rolling Ingots (32 KTPA), Carbon Block (1700 MTPA) and Carbon paste (70 KTPA). The Operation of smelter (alumina to aluminium) was stopped since 1992 and casting plant and carbon block plant were shut down since 2001. At present alumina refinery and carbon paste plant are in operation.
2. 1730 KLD of river water from Hidkal Reservoir is used by the industry for process and domestic purpose. In addition, average 795 KLD of raw effluent is reused in the process. The water meter is not installed for quantification of the wastewater reused in the process.
3. 1200 KLD of effluents is generated from process, boiler blow down, cooling water and washing section are collected and stored in Red mud pound (RMP) -3 of 7.5 X 105 m³ capacity. The RMP -3 is provided with HDP liner and clay layer and part of the effluent is reused in the process, road washing and sprinkling. The flow meter is not installed at the inlet of the Red mud Pond for quantification of the effluent generated.
4. On June 29, 2015 unit has installed two probes, one for pH analysis and another probe for analysis of COD, BOD and TSS at the out let of the secondary clarifier for 8 days (September 14-21, 2016) during monsoon. The flow meter at the outlet of the ETP is not installed.
5. During the inspection the depth of effluent in Red mud Pond -3 was 4.2 m and the ETP was not in operation. pH probe and probe for BOD, COD and TSS are placed in the drum containing distilled water in the outlet canal, to prevent damage of the probes. The display panel was showing constant reading for pH, COD, BOD and TSS.
6. The online data was not connected to the CPCB portal till December 26, 2016. On December 27, 2016 connectivity to CPCB portal was provided by the unit and the data is offline.

7. The specification of the instrument was verified in the field as well as in the CPCB portal. The model of the instruments (pH, BOD, COD and TSS) are Blue Box TS0209 but in CPCB portal it is mentioned as Blue Box D00015. The serial number of the instrument and model shall be updated in the CPCB portal.
8. The last calibration on instrument was carried out on September 14, 2016, before starting the operation of the ETP. The online data of OEMS for effluent is not stored and is not able to retrieve on CPCB portal. The online data for the period September 21-22, 2016 (15 minutes interval) is available in the vender/suppliers portal.
9. The leachate from the Red Mud Pond -1 & 2 is collect in the natural garland drain around the ponds and discharged into Red Mud Pond-3. The proper garland drains with adequate depth shall be provided by the industry around the red mud ponds and the drains shall be desilted periodically.
10. The unit has procured three continuous online stack gas emission monitoring system (SO₂, NO_x & CO) and three continuous online stack particulate matter emission monitoring systems. Out of this two PM analyzers and gas emission analyzers are kept in stores without installation. The one OEMS for PM is installed at common stack connected the Kiln I, II & III on June 29, 2015. The OEMS for gas (SO₂, NO_x & CO) are installed at common stack attached to boilers and common stack connected the Kiln I, II & III. The data from these gaseous analyzers are only displayed in the display panel and are not connected to the LAN or stored in the computer.
11. The analysis of the effluent samples collected from the lagoon shows the Sulphide (8.7mg/l) and Vanadium (0.39 mg/l) were higher than the effluent discharge limits prescribed by the KSPCB for discharge from lagoon during monsoon.
12. The unit was treating 632 KLD of sewage generated from colony in 2 number of Bio-filters of total capacity 450 KLD, which was inadequate. The unit is in the process constructing a new STP of additional capacity of 450 KLD based on aerobic treatment process and installation was under progress during inspection.

13. The leachate from the red mud pond-1 & 2 is collected in the natural garland drain around the ponds and discharged into red-mud pond 3. The proper garland drains with adequate depth shall be provided by the industry around the red-mud ponds and the drains shall be desilted periodically.
14. The analysis of the online data for the period December 1, 2016 to December 28, 2016 (1 hr average) shows that the average concentration of PM was 82.2 mg/Nm³ (Maximum : 1105.7 mg/Nm³ , Minimum : 52 mg/Nm³). The exceedance was 36 times in previous month and accordingly alerts were received by the unit. During inspection up gradation of the ESP attached to Kiln II was under process. It was informed by the unit representatives that during trials of ESP II the dust emissions are high.
15. The stack monitoring was carried out on December 27, 2016 during 14.15 PM to 17.15 PM and the sample was drawn during 16.15 PM to 17.15 PM for 1 hour. The manual stack monitoring results shows that the PM emission was 51.5 mg/Nm³. The online data recorded by OCEMS was analysed for the same period and noticed that average PM emissions was 119.73 mg/Nm³ . The online monitoring value is exceeding 43% the manual monitoring value.
16. The calibration was done only during the installation of the instruments and opacity is set to 0 to 100% for PM. After installation, calibration or maintenance of the instrument was not carried out and the industry is yet to provide contract for calibration to the vender/ service provider. The calibration and servicing of the instrument is required for accurate online monitoring.
17. The unit has one CAAQMS station with in plant premises and 4 manual ambient air quality stations. As per calibration protocol, frequency of calibration protocol, frequency of calibration of CAAQMS is 3 months. However, the unit is not calibrating the instrument as per the schedule. The online readings are instantaneously available only in the display panel and provision for data storage is not provided and hence, data is not retrievable.

WHEREAS, based on the observations made by the 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, CPCB served directions no. CPCB/PCI-II/AI/OMS/24363 dated 07/03/2017

directing M/s Hindalco Industries Limited, Belagavi Works, Belagavi, Karnataka to comply with the following direction/s by 31/03/2017:

- To install Flow meter at the inlet of the Red Mud Pond-3 to quantify the effluent generated and water meter for quantification of the wastewater reused in the process. The records of effluent generated and reused shall maintain.
- To install OEMS for PM at the stack attached to Klin-IV and hydrate precalciner and provide connectivity to CPCB server.
- To carryout calibration and servicing of the online continuous emission and effluent monitoring systems, periodically and as per the schedule.
- To provide garland drains with adequate depth and concrete lining around Red MUD Pond- 1 & 2 and collect and divert the leachate to Red Mud Pond 3. Desilted of the drains shall be carried out regular frequency.
- To update the CPCB registration details (Latitude, Longitude, Web Link, Contact details and Serial number & Model number of the OCEMS instruments as these details are not matching/absent in the CPCB registration portal)

WHEREAS, the observations/findings given in the inspection report as refereed above and conditions of Consent Order under the Water (Prevention & Control of Pollution) Act, 1974 as issued to industry by Karnataka State Pollution Control Board, the matter was further discussed in a high level meeting at CPCB and it is realised that following additional issues needs to be addressed appropriately by the industry & KSPCB:


- i. As per the Consent Order issued by KSPCB, the products manufactured include Alumina, Sodium Vanadate, Rolling Ingots, Carbon Blocks, Carbon paste and Aluminium metals. However at present only Alumina and Carbon paste are currently being produced. Following points be clarified:
 - a. Whether the industry has facilities to manufacture all the products mentioned in the consent order?
 - b. If 'Yes', whether all the pollution control measures including OCEMS are in place & working condition?
 - c. If 'No', why not the consent order be modified to mention only the products being manufactured presently?
- ii. As per Consent conditions , the quantity of wastewater discharge is 2400 KLD which is to be treated in ETP and the treated effluent needs to be recycled back for cooling purpose & sprinkling of dry exposed area of red mud pond. During wet weather flow, any discharge from the pond shall conform to the standards. During inspection, it was observed that the untreated effluent stored in

RMP-3 is reused in the process, road washing and sprinkling. This is in violation of the consent condition as only treated effluent is permitted to be reused and the excess quantity to be discharged in wet weather / rainy period.

- iii. The Censor of OCEMS installed at the outlet of ETP is showing the status as 'Offline' due to non operation of ETP for last more than six months. It is obvious that ETP is not operated for more than six months and entire untreated waste-water from the industry is used for sprinkling on the red-mud pond / cooling purposes / road washing etc which is violation of the Consent Conditions. Under such circumstances , possibility of discharge of untreated waste-water outside the premises cannot be ruled out.
- iv. Even the web-cameras at discharge points are also not installed to confirm / verify the actual wastewater discharge status at any given point of time.
- v. It is observed that the effluent is let into a lagoon for storage and then the lagoon-overflow is discharged outside the factory premises to nearby pond through natural drain. It will be appropriate to install an additional online effluent monitoring probes in the lagoon nearer to the lagoon-overflow discharge point. The quality of the effluent at Secondary Clarifier outlet and the quality of the lagoon-overflow (discharged outside factory premises) are expected to differ. It is worth to mention here that the quality of effluent stored in the lagoon (e.g. Sulphide -8.7 mg/l; Vanadium -0.39 mg/l) is not meeting the prescribed discharge standards.
- vi. The flow measuring devices are required to be installed at inlet and outlet points of Red Mud pond -3, treated wastewater storage lagoon and other suitable places so as to measure / keep record of quantity of wastewater generated, reused, recycled or discharged outside factory premises. Presently flow meters are not provided at required points.
- vii. The raw effluent and treated effluent storage ponds and lagoons are to be provided with suitable lining so as to prevent any seepage of stored wastewater into the surrounding environment and contamination of groundwater/surface water resources.

NOW THEREFORE, keeping the observations/recommendation mentioned in the inspection report and points as mentioned above, M/s Hindalco Industries Limited, Belagavi Works, Karnataka is hereby

directed to close down its all operations with immediate effect failing which legal action as per the National Green Tribunal Act, 2010 shall be launched.


(S.P. Singh Parihar)
Chairman

Copy to:

1. The Chairman
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2. The Joint Secretary-CP Division
Ministry of Environment, Forest and Climate Change
Indira Paryavaran Bhawan, Jorbagh Road
New Delhi - 110003
3. The Regional Director- South
Central Pollution Control Board
1st & 2nd Floors, Nisarga Bhavan,
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(Dr. A. B. Akolkar)
Member Secretary