

**SPEED POST**

CPCB/PCI-II/AI/OMS/11422

21/09/2017

To

The Unit Head  
M/s National Aluminium Company Limited (NALCO),  
(A Government of India Enterprises)  
Smelter Plant, PO. Nalconagar,  
Dist. Angul-759145, Odisha

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

- Ref.:**
1. CPCB's direction No. CPCB/PCI-II/AI/OMS/5141, dated July 23, 2015.
  2. CPCB's letter no. CPCB/PCI-II/AI/OMS/19111-113, dated 11/02/2016
  3. NALCO's (Smelter plant) reply no. AGLS/GM(S)/047/2016, dated 15/02/2016

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 may 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 to submit bank guarantee of 100% of the cost of online emission & effluent monitoring system; and

WHEREAS, CPCB has explored installation of Online Monitoring device in the other countries and has come to conclusion that the 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/Cu/OMS/5141) on July 23, 2015 directing M/s NALCO 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 follow-up to the CPCB Directions dated 23/07/2015, CPCB sent the above referred letter dated 11/02/2016 to act on the following pending tasks:

1. To register on CPCB website by updated information.
2. To provide the connectivity for transmitting real-time online monitoring data for the stipulated parameters for both emission and effluent, to the CPCB server and to provide the associated web address/URL (along with user ID & password).
3. To provide the desired information/data about the alumina refinery also (in addition to smelter)

WHEREAS in response to the CPCB's correspondence M/s NALCO, smelter plant sent the above referred letter dated 15/02/2016 indicating the following facts:

1. M/s NALCO Smelter Plant, Angul, Odisha has already installed the Online Continuous Emission and Effluent Monitoring Systems (OCEMS) and hooked up the data to the OSPCB servers.
2. Connectivity of M/s NALCO Smelter Plant, Angul to CPCB server is pending at industry end and needs some assistance about the detailed scheme/protocol for transmitting the data from smelter plant to CPCB server.

WHEREAS, based on the above facts an e-mail dated 10/02/2017 was sent to M/s NALCO, Smelter plant requesting the industry to update the connectivity status of Online monitoring Systems with CPCB server. In response of this M/s NALCO, Smelter plant replied vide its e-mail dated 14/02/2017 reporting that online monitoring system for both emission and effluent parameters has been installed and data



connectivity to CPCB server for emission and effluent parameters has been completed; 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 National Aluminium Company Limited (NALCO), (A Government of India Enterprises) Smelter Plant, PO. Nalconagar, Dist. Angul-759145, Odisha large number of SMS alerts have been generated during Jan.-May, 2017; and

WHEREAS, in order to verify the compliance and find out the status of online monitoring system, a team from CPCB, Kolkata Office (RD-East) carried out an inspection of of M/s National Aluminium Company Limited (NALCO), Smelter Plant, PO. Nalconagar, Dist. Angul-759145 on 26-27/03/2017 and made some observations, which are as follows:

- (i) Consent to operate is valid under Water and Air Acts upto 31.3.2019 to manufacture ALUMINIUM METAL (4.6 LTPA). HW authorization is valid upto 31.3.2021.
- (ii) Aluminium is produced using Alumina as major raw material in the smelter based on pre-baked technology. The unit installed 960 pots in 4 pot lines of 240 pots each.
- (iii) Wastewater is generated from floor washings, cooling circuits in casting house, soaking water from pot-lining area and washings in other utilities. The entire effluent is collected in a lagoon and from where it is lifted for treatment in fluoride removal plant.
- (iv) As per CTO, the unit is to recycle the entire effluent to maintain ZLD except during monsoon (June-September). During monsoon, the unit is allowed to discharge 2640 KLD in a drain Kisinda jhor from the holding pool carrying treated effluent from STP and DF Plant.
- (v) The analysis of wastewater sample collected from the final outlet (recycled) showed pH of 7.57, BOD of < 2.5 mg/l, COD of 16 mg/l, TSS of 24 mg/l, O&G of < 5 mg/l and F of 1 mg/l and found to be meeting the prescribed standards.
- (vi) Gaseous and particulate emissions from all the ports are collected through suction hoods covering each pot and transmitted through ducts to Flue Gas Treatment Plant (FTP) wherein the flue gas is scrubbed with fresh alumina (raw material) for recovery of fluoride and to reduce the PM and fluoride emission.
- (vii) Stack emission (PM and Fluoride) was monitored from stack attached to FTP-7 and the results showed that PM level (< 10 mg/Nm<sup>3</sup>) was within the limit (100 mg/Nm<sup>3</sup>). **The Fluoride concentration was 0.6 mg/Nm<sup>3</sup> in particulate and 2.4 mg/Nm<sup>3</sup>**

Wx


in gases, with a total of 0.56 kg/T of Al production against the consent standard of 0.3 kg/T of Al produced.

- (viii) There are 10 continuous online monitoring system (9 stacks for PM and fluoride and 1 ETP outlet for pH, TSS, BOD, COD & Fluoride) as per IT Div report dated 22.8.2017. As per CTO, there are 11 stacks attached with Pot room and bake oven and stack 17 attached to Bake Oven-II was dismantled and not in use. FTP-2 is not in operation due to marketing conditions.
- (ix) All online values were found to be within the limits but not matching with the monitored value stack attached to FTP-7. For FTP-6 stack online data was not available due to some technical problems.
- (x) Four continuous ambient air quality monitoring system are installed. The online analyser for RSPM of AAQMS-2 was not working.

NOW, THEREFORE, 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, this Show Cause Notice is hereby served to M/s National Aluminium Company Limited (NALCO), Smelter Plant, PO. Nalconagar, Dist. Angul-759145, Odisha to show cause as to why your plant should not be closed down for the short-comings as observed during the inspection by CPCB team as highlighted above and directing the industry to comply with the following Directions by 30/09/2017:

1. Operation and maintenance of FTP #7 shall be improved in order to meet the stipulated norm for fluoride emission.
2. Online analyzers for fluoride parameter in FTP #7 shall be calibrated so as to ensure the difference between online values and lab results to a minimum.
3. Operation of the online analyzer for RSPM of AAQMS#2 shall be resumed immediately.
4. The fluoride auditing report of smelter potroom through NABL/EPA approved lab shall be submitted to this Office.

The compliance status of above directions and reply of Show-Cause Notice reply shall be submitted to this office within 15 days of the issue of the directions. In case of failure to comply with the said directions and no strong and acceptable reasons of high fluoride emission in FTP stack, necessary action as deemed fit under the provision of the Environment (Protection) Act 1986 will be taken by CPCB.

  
24/09/2017  
(S.P. Singh Parihar)  
Chairman

*Handwritten initials*

Copy to:

1. The Member Secretary : with the request to  
Orissa Pollution Control Board, follow-up with the  
A-118, Nilakanta Nagar, Unit -VIII, the industry  
Bhubaneshwar - 751012
2. The Regional Directorate, RD (East) : with the request to  
Central Pollution Control Board follow-up with the  
Southend Conclave, Block 502, the industry  
5<sup>th</sup> & 6<sup>th</sup> Floors,  
1582 Rajdanga Main Road,  
Kolkata-700107 (West Bengal)
3. The Secretary  
Ministry of Environment, Forests & Climate Change  
'Indira Paryavaran Bhavan'  
JorBagh Road  
New Delhi - 110 003
4. The Divisional Head, IPC-VI, CPCB-Delhi
5. The Divisional Head, IT division, CPCB-Delhi.

*28/09/17*  
( A. Sudhakar)  
Member Secretary  
*b/c*