

**Minutes of the Meeting held pursuant to Direction of National Green Tribunal
in Application No. 102 of 2014 by Sandplast (India) & Anr. regarding
Utilization of Fly Ash**

The Hon'ble National Green Tribunal (NGT) in Application No. 102 of 2014 on 17.12.2014 directed that the Ministry of Environment, Forests and Climate Change shall discuss with stakeholders the issues related to non implementation of Notification of Fly Ash Utilization. In pursuance to this direction, Shri Shashi Shekhar, Special Secretary convened a meeting on 7th January, 2015 in the MOEF&CC. The List of participants is annexed herewith.

2. After welcoming the participants, the Chairman requested Shri Bishwanath Sinha, Joint Secretary (MoEFCC) to brief about the Tribunal matter and discuss the objective of the meeting. The JS informed that the notification on fly ash utilization was first issued in the year 1999 and since then, the fly ash utilization in the country has increased from 13.51 % up to 57.63% in the year 2013-14. The Notification mandates use of fly ash or fly ash based products in construction projects, construction of embankments of roads or flyovers, reclamation of low lying areas, backfilling or stowing of mines, etc. As per this notification, all construction projects in the vicinity of 100 kilometers of a TPP have to use of fly ash based material. A condition for utilization of fly ash as per the provisions of the Notification is prescribed in the environment clearance granted by the Ministry to Thermal Power (TPPs) and Road Construction Projects. However, it is observed that there are lapses in implementation of the notification and most of the TPPs are behind the targets prescribed in the Fly Ash Utilization Notification, 2009. The notification is being flouted by most of the construction agencies and it is observed that either the relevant agencies have not included these conditions in their 'Schedule of Rates' or if included, not ensuring the same. JS emphasized for an urgent need to improve the implementation of the Notification hence the fly ash utilization in the country.

3. The Representative of Central Public Works Department (CPWD) and National Highways Authority of Indian (NHAI) informed that the provisions have been included in their Schedule of Rates; however, the contractors for construction are not following the condition. The Chairman made it clear that it is the responsibility of CPWD/NHAI and other relevant agencies to ensure utilization of fly ash as per the notification and the condition prescribed in the EC.

4. The Chairman opined that fly ash generation is reported to be 172.87 million tons during 2013-14 and it is likely to increase up to 260 million ton by 2020. Unless immediate strict measures are taken to utilize fly ash appropriately, it will become a big problem in near future. Considering the problem of disposal of fly ash, as well as the opportunities for its utilization in the country, the distance criteria provided in the notification needs to be expanded so that more projects come under the purview of the notification. It is proposed to amend the notification to include the following lines:

- (i) The distance from TPP for mandating use of the fly ash/ fly ash based materials in all construction projects may be increased from 100 kilometers to 500 kilometers.
- (ii) Every construction project within a radius of 500 kilometers from a coal or lignite based thermal power plant would use only fly ash based products such as cement or concrete, fly ash bricks, blocks, tiles etc. for their construction.
- (iii) Every construction agency engaged in construction of roads within a radius of 500 kilometers from a coal or lignite based thermal power plant would be bound to use fly ash in accordance with the guidelines or specifications issued by the Indian Road Congress.

- (iv) Every construction agency engaged in construction of flyovers, embankments, bunds, etc within a radius of 500 kilometers from a coal or lignite based thermal power plant would be bound to use fly ash.
- (v) The cost of transportation of fly ash up to 100 kilometers for such projects is to be borne by the thermal power plant. The cost of transportation beyond 100 kilometers and up to 500 kilometers shall be shared equally between the construction agency engaged and the thermal power plant.
- (vi) The thermal power plants would be bearing entire cost of transportation of fly ash to road construction projects under Pradhan Mantri Gramin Sadak Yojna (PMGSY) and asset creation programmes of the Government involving construction of buildings, roads, dams and embankments, etc.
- (vii) The aforesaid condition would be included in environmental clearances given to the Construction and Road Projects under the Environmental Impact Assessment Notification, 2006, as amended.
- (viii) The Ministry also proposes to bring the cement industries under the purview of the notification by making it mandatory for cement industries, within radius of 500 kilometers of a coal or lignite based thermal power plant, to use fly ash for manufacture of the cement as per the specifications of Bureau of Indian Standards (BIS). The cost of transportation of fly ash to be borne collectively by the thermal power plant and the industry concerned.
- (ix) Mine void filling should be allowed only for such mines which have the closure certificates from the Central Mine Planning and Design Institute (CMPDI) or a certificate that the mine void could be used for backfilling. However, mine void filling should be considered as last option, after exploring all other available options. This will not apply to TPPS, which have been given permission for mine void filling on experimental basis. The State Pollution

Control Boards shall ensure the same while giving permission/ authorization/ Consent to Operate.

5. The Chairman invited comments from the participants on the above suggested revisions. The Representative from Cement Manufacturers Association (CMA) submitted that during the year 2013, about 41% of total fly ash generated was used by cement industries in the country. However, percentage of fly ash which could be used in cement depends on the quality of raw materials mainly the lime stone. Presently, as per the Bureau of Indian Standards (BIS), up to 35% of fly ash could be used in cement manufacture however, it is observed that at some places where the quality of limestone permits, higher use of fly ash into the cement is possible. Therefore, they have requested BIS to increase this permissible limit up to 45%. The representative of BIS informed that CMA is already conducting a R&D study to explore this possibility and as soon as the study is completed, BIS would consider revising the limits given in 'IS: 1489 Portland Pozzolana Cement-Specification'. It was decided that CMA would expedite completion of the study and provide relevant data to BIS for the requisite revision.

6. The NTPC agreed with the above mentioned proposals but was of the view that provisions relating to disposal of fly ash in mines should be continued as the thermal power plants located at the pithead of coal mine clusters, have serious issue of ash utilization because of their remote location. Certain power plants like Talcher TPP in Orissa, have no other option therefore, has been disposing off fly ash in mine voids as per the permission of the State Pollution Control Board. However, recently this practice has been reviewed by the Ministry and permission has been given only for one year as pilot project. If this permission is revoked, the TPP has no other option to close down. It was decided that case specific situation may be reviewed and allowed by the Ministry.

7. The representative of IA (Thermal) Division informed that issue of mine back filling by thermal power plants in Orissa was under discussion by the Expert Appraisal Committee (EAC) of MoEF since June 2011. The main concern raised was leaching of

heavy metals from fly ash into ground water. For ascertaining this, studies are being conducted in certain areas of Orissa by NEERI, Nagpur and BARC, Mumbai. The Ministry in September, 2013 granted permission to such power plants in Orissa for ash backfilling as a demonstration pilot project for a period of one year subject to the results of these studies. The findings of the study were discussed by EAC in August, 2014 and certain additions were suggested in the studies. EAC has, therefore, recommended for allowing these power plants to continue the disposal into mine void for another period of six months/ one year. Meanwhile, the studies are to be completed and appraised by the Committee.

8. It was mentioned by the Ministry that in the last meeting of Central Monitoring Committee, it was decided that Central Pollution Control Board (CPCB) shall conduct a study to analyse leaching characteristics of coal and ash samples obtained from various Geo-regions of the country through various laboratory extraction procedures and submit the report **within three months**. CPCB may also submit their report immediately. Based on the results of these studies, the Ministry shall take a final decision regarding option of mine void filling by fly ash.

9. With regard to cost of transportation of fly ash to the construction projects, NTPC submitted that this would require the approval of Central Electricity Regulatory Commission. JS (MOEFCC) clarified that since it would be mentioned in the Fly Ash Utilization Notification; no separate approval would be required from CERC. NTPC also submitted that construction of road is one time activity and have limited potential to utilize fly ash. The contractors engaged in road construction do not lift the fly ash. The Chairman suggested that the road construction activity has a cycle and with the provision of sharing the cost, situation should improve. The increase in distance from 100 to 500 kilometer together with strict enforcement of EC provisions would definitely result in utilization of fly ash in such projects.

10. The Representative from Orissa State Pollution Control Board submitted that any modification in the notification should be supplemented by the strengthening of monitoring mechanism. Besides, there is a need to bring more clarity in terms of the agencies responsible for implementation and monitoring of the fly ash utilization in the country.

11. Ms. Tasneem Ahmadi, Advocate for Sandplast (India) suggested restricting production of red bricks around the thermal power plants. It was clarified by the Chairman that the inclusion for use of fly ash bricks/ fly ash based products in the Environmental Clearances to construction projects along with strict monitoring mechanisms of such conditions is likely to increase the market for the fly ash bricks/ fly ash based products. Therefore, for the present, restricting the production of red bricks around the thermal power plants may not be considered. Ms. Ahmadi also submitted that the thermal power plants should facilitate setting up of units for production of fly ash based products in the proximity of their ash ponds by sharing cost and by making available land, electricity and water for such units. The Chairman opined that such provision to facilitate setting up of ash based production units in the proximity of the thermal power plants by the concerned Central and State Government Agencies, NTPC, etc. already exists in the present notification. However, such arrangements are entirely between TPPs and bricks/fly ash products manufacturing units.

12. It was finally decided that the Minister may consider amending the notification on these lines.

The meeting ended with vote of thanks to the Chair.
