

**BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI
Original Application No. 10 of 2022(SZ)**

IN THE MATTER OF:

E. Srinivasan, Salem District.

.... Applicant

Versus

The Chairman,

Tamil Nadu Pollution Control Board,

Chennai and Ors.

.... Respondents

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Place: Chennai

Date:17.02.2023

H.D. Varalaxmi

DEPONENT

H.D. VARALAXMI, M.Tech
Regional Director
CENTRAL POLLUTION CONTROL BOARD
(MoEF & CC, Govt. of India)
Regional Directorate (Chennai)
2nd Floor, 77-A, South Avenue Road,
Ambattur Industrial Estate, Chennai - 600 058



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**REPLY AFFIDAVIT FILED ON BEHALF OF RESPONDENT NO. 10 i.e. CENTRAL
POLLUTION CONTROL BOARD**

I, H.D. Varalaxmi, working as Scientist “E”, in Regional Directorate (Chennai), Central Pollution Control Board, Second Floor, No.77-A, South Avenue Road, Ambattur Industrial Estate, Ambattur Taluk, Thiruvallur District, Chennai, Tamil Nadu - 600058, do hereby solemnly affirm and declare as under:

1. That I am fully conversant with the facts and circumstances of the present case and I am duly authorized to affirm and swear this affidavit on behalf of the Central Pollution Control Board (hereinafter referred to as CPCB).
2. This application has been filed by Shri E. Srinivasan, Salem District, who has raised the issue regarding pollution being caused by the fly ash brick manufacturing units, located in Mallamuppanpatti Village, Aiyamperumal Patti (P.O.), Salem West Taluk, Salem District, Tamil Nadu.

3. That, the CPCB categorizes industries, on the basis of Pollution Index (PI) which is a function of water pollution, air pollution, hazardous waste generation, fuel consumption and amount of waste water generation.
4. That, the purpose of categorization is to ensure that the industry is established in a manner consistent with the environmental objectives and to prompt industrial sectors to adopt cleaner technologies, ultimately resulting in generation of no or minimum pollutants.
5. That, so far, CPCB has categorized 254 industrial sectors i.e. 61 under red, 90 under orange, 65 under green and 38 under white category, and directed State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) to adopt the same.
6. That, the white category of industries is not required to obtain consent to operate from SPCBs/PCCs, however, an intimation regarding installation of unit, to concerned SPCB/PCC is must.
7. That, as per CPCB directions dated 07.03.2016, SPCBs/PCCs are empowered to categorize new/left-out sectors at their own level, based on the methodology prescribed by CPCB.
8. That, CPCB has categorized “Brickfields (excluding fly ash brick manufacturing using lime process) under “Orange” category, considering the significant air pollution during firing operations (burning of large quantity of fuel) for baking bricks.
9. That, in case of “Fly ash brick manufacturing using lime process”, no such fuel-based emissions are generated. In this process, fly ash, lime, gypsum and sand are manually fed into a pan mixer where water is added to the required proportion for homogeneous mixing. After mixing, the mixture is fed through the belt conveyor to brick making machine, where the bricks are pressed automatically/manually and then the bricks are placed on wooden pallets and kept as it is for two days, thereafter transported to open area where it is water cured for 10-14 days. As any fuel is not burnt in this process, the said sector is categorized under white category of industries.


10. That, in case of fly ash brick manufacturing and autoclaved aerated concrete blocks manufacturing units using steam for accelerated curing of bricks, boiler is required. These units use fuel (such as coal, wood, etc.) in boiler, which generates emissions. As it is a left-out industrial sector, SPCBs/PCCs may categorize such units at their level. As an example, the Pollution Control Committee, Daman, Diu and Dadra Nagar Haveli (PCC, DD&DNH) has categorized “Fly ash brick manufacturing units using less than 12 MT/day fuel” under “Green” and “Fly ash brick manufacturing units using more than 12 MT/day fuel” under “Orange” category, by following the methodology prescribed by CPCB. A copy of order no. PCC/DD-NGT-77(2019) (DNH)-ACC Platinum (Part-1)/2019-20/31, dated 27.01.2021, issued by PCC, DD&DNH, regarding categorization of “fly ash bricks and blocks manufacturing units using fuel” is annexed and marked as "**Annexure R10-I**".

11. That, during December, 2013, CPCB published the “Guidelines for loading, unloading and nuisance free transportation of all types of fly ash, including bottom ash, etc. generated by thermal power stations”. In order to control fugitive emissions due to transportation and handling of fly ash, CPCB has included the following provisions for “Fly ash based Brick, Tiles, Blocks, etc. manufacturing units”: *“i. Tankers/ Bulklers or mechanically designed covered Trucks need to be used.*
ii. Tractor trolleys with box type cover on top with hydraulic unloading system need only to be deployed for transportation of dry or wet fly ash, while traversing through habilitated areas otherwise, Tractor trolleys suitably covered with good quality of tarpaulin (made of HDPE) could be allowed to transport fly ash for shorter distance say up to a distance of about 10 kms.”.

A copy of CPCB “Guidelines for loading, unloading and nuisance free transportation of all types of fly ash, including bottom ash, etc. generated by Thermal Power stations” is annexed herewith and marked as "**Annexure R10-II**".

That, in case of cognizance of any sort of pollution from the industrial units, including fly ash brick manufacturing units, SPCB/PCC may take action in accordance with the provisions of Environmental Acts and Rules.

12. That, in light of the facts and circumstances mentioned above, this Answering Respondent shall abide by the orders and directions passed by this Hon'ble Tribunal.



DEPONENT

H.D. VARALAXMI, M.Tech
Regional Director
CENTRAL POLLUTION CONTROL BOARD
(MoEF & CC, Govt. of India)
Regional Directorate (Chennai)
2nd Floor, 77-A, South Avenue Road,
Ambattur Industrial Estate, Chennai - 600 058

VERIFICATION

It is verified that the content of this Affidavit which is based on official record and information available in the office are true and correct. Nothing has been concealed therein. Verified on the 17th day of February, 2023 at Chennai.



DEPONENT

H.D. VARALAXMI, M.Tech
Regional Director
CENTRAL POLLUTION CONTROL BOARD
(MoEF & CC, Govt. of India)
Regional Directorate (Chennai)
2nd Floor, 77-A, South Avenue Road,
Ambattur Industrial Estate, Chennai - 600 058



Annexure R10 - I

No. PCC/DDD/NGT-77(2019)(DNH)-
ACC Platinum (Part-I)/2019-20/ 31
Office of the Member Secretary,
Pollution Control Committee
Udyog Bhavan, First Floor
Bhenslore, Nani Daman
Dated: 27.01.2021

Sub: Directions under Section 18 (1) (b) of the Water (Prevention & Control of Pollution) Act,1974 and the Air (Prevention & Control of Pollution) Act,1981 regarding granting permission to operate in compliance of orders of Hon'ble NGT.

ORDER

In Compliance of Orders of Hon'ble NGT, the Chairman, CPCB in exercising the powers conferred under Section 18 (1) (b) of the Water (Prevention & Control of Pollution) Act, 1974 and 18 (1) (b) of the Air (Prevention & Control of Pollution) Act, 1981 directed PCC,DD&DNH to categorise the Industrial sector, Fly ash bricks/blocks manufacturing using fuel under green or orange category, depending on the quantity of fuel consumption, in line with the CPCB criteria and guidelines for categorisation of Industrial sectors.

In view of the above, as per methodology given Table F-2: Air Pollution Score, in the final document on revised classification of Industrial Sectors under Red, Orange, Green and White Categories of CPCB (February,2016), the categorisation of Industrial sector, Fly ash bricks/blocks manufacturing using fuel under green or orange category is carried out in compliance of the directions of CPCB and orders of Hon'ble NGT as under.

Green Category:

For all such industries in which the daily consumption of fuel is less than 12 MT/day and the particular (Particulate/gaseous/process) emissions from which can be

controlled with suitable proven technology falls under green category.

Orange Category:

For all such industries in which the daily consumption of fuel is 12 MT/day to 24 MT/day and more than 24 MT/day and the particular (Particulate/gaseous/process) emissions from which can be controlled with suitable proven technology and particular emissions from which can be controlled only with high level equipments/technology like ESPs, Bag House filters, High efficiency chemical wet scrubbers etc. respectively falls under Orange category.

This issue with the approval of the competent authority.

[Signature] 27/1/21
(K. Ravichandran)
Member Secretary,
PCC, DD&DNH

Copy to

1. Chairman, CPCB for favour of information
2. Advisor to Administrator, DNH &DD for favour of information
3. PS to Hon'ble Administrator, DNH &DD for favour of information

**GUIDELINES FOR LOADING, UNLOADING AND
NUISANCE FREE TRANSPORTATION OF ALL
TYPES OF FLYASH, INCLUDING BOTTOM ASH
ETC. GENERATED BY THERMAL POWER STATIONS**



**Central Pollution Control Board
Delhi
December 2013**

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1.0 Introduction

Indian coal is generally of low grade having high ash content ranging from 40 – 48 % and thus large quantity of ash is being generated at coal/lignite based Thermal Power Stations in the country, which is the source of pollution of both air and water. During 2012-13 about 163 million tonnes of flyash was generated. It is expected that during 12th & 13th Plans, more than 100000 MW power generation capacity is likely to be added which would be resulting in an increase of ash generation by about two folds by the year 2022. The quantum of fly ash to be handled, therefore, would be much more than in the past.

As per the conventional practices, ash is disposed in slurry form to the ash ponds and the overflow from the ash pond after adequate settling time used to be discharged in nearby water bodies. This mode of ash disposal was not only causes air & water pollution but also requires large land area for its disposal. However, after implementation of the recommendations made under Corporate Responsibility for Environmental Protection (CREP) in the year 2003, power plants have been asked to stop discharge of ash pond overflow water and recycle it back to the plant for different usages.

- 1.1 To protect the environment, conserve top soil and prevent dumping & disposal of ash generated from coal/lignite based fired thermal power plants on land and for restricting the excavation of top soil for manufacturing of bricks and building materials, Ministry of Environment & Forests, Government of India, issued directions vide Notification nos. S.O 763 (E) dated September 14, 1999 and as amended in the years 2003 & 2009 (S.O. 979 (E) & 2804 (E) dated August 27, 2003 & November 03, 2009 respectively) to use hundred per cent of flyash generated by thermal power plants in a time bound manner. The Notification also emphasized that flyash shall be utilised for manufacturing of bricks, tiles, cement, concrete etc., construction of roads within 100 kms radius from thermal power plants and backfilling/reclamation of abandoned mines/ quarry (both underground and open cast) shall be done with flyash, if located within 50 kms radius from thermal power plants.
- 1.2 As per the 2009 Notification on flyash utilisation, transportation of flyash should be in an **environmentally sound manner**. Flyash is categorised as high volume low effect waste under Hazardous Waste (Management & Handling) Rules, 2008 (S.O. 2265 (E) dated September 24, 2008) and thus excluded from the category of Hazardous waste. The guidelines for transportation of flyash have not been prepared by Central Pollution Control Board, so far. However, the consent under Air (prevention & Control of Pollution) Act, 1981 issued by State Pollution Control Boards envisages that flyash should be transported in an environmentally friendly manner.

1.3 The Hon'ble Supreme Court of India in its Order dated August 13, 2013 & September 24, 2013, in the matter of **DamodarValley Corporation&Ors Vs BKB Transport (P) Ltd.& Company, SLA No. 30381 of 2011**, directed CPCB to frame guidelines for loading, unloading, utilization and nuisance free transportation of all types of flyash, including flyash, bottom ash etc. generated by thermal power stations prepared at the earliest. In line with the directions of Hon'ble Supreme Court, CPCB accordingly constituted a Committee to prepare the desired guidelines.

2.0 The Committee

To evaluate and suggest all aspects of handling and transportation of flyash like, in plant handling/storage, transportation to the user's/disposal site, road and rail tankers, transfer by boats, barges for export, closed tankers etc, a Committee under the chairmanship of Sh. T.K. Dhar, Former Executive Director (Environment and R&R), NTPC was constituted vide Office Order dated October 07, 2013. The composition and Terms of Reference (ToR) of the Committee are given in **Annexure I**.

The committee met on October 23, 2013 & November 21, 2013 at CPCB, Delhi. The committee discussed the current practices for handling and disposal of flyash & bottom ash, its utilisation and transportation modes and environmental issues involved. Based on the suggestions and recommendation of the Committee, guidelines on loading, unloading and transportation of flyash, bottom ash & pond ash were prepared.

3.0 Flyash Utilisation

3.1 Utilisation of Flyash gained momentum only after enactment of Notification by the Ministry of Environment & Forests, Government of India in the year 1999. During the past decade, flyash utilisation has increased by more than six folds from 9 % (1996-97) to about 61% in the year 2012-13 (source :CEA). The major modes of flyash utilisation are as under:-

Cement manufacturing	41%
Ash Dyke raising	12%
Reclamation of Low lying areas	11%
Road construction	6%
Brick manufacturing	9%
Backfilling in Mines	10%
Others	11%

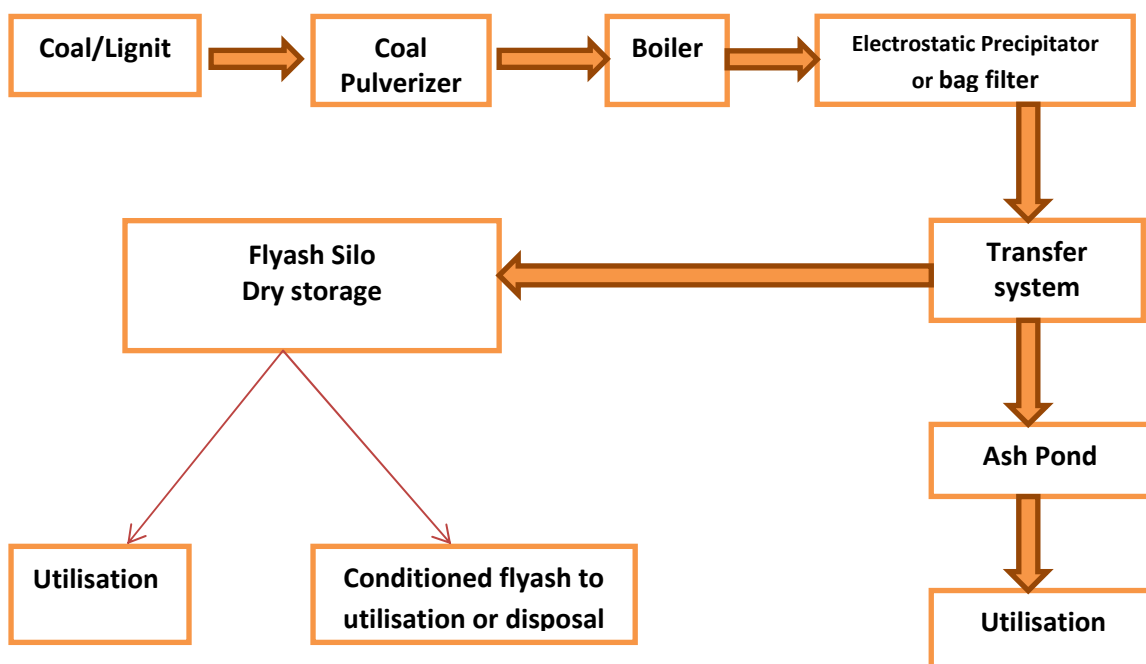
Flyash is also being exported at few thermal power plants to nearby countries such as BanglaDesh and Dubai.

The balance flyash is stored into ash ponds. The filled - in abandoned ash ponds or ash mounds are reclaimed with top soil cover and development of green belt (by planting local species)over it.

- 3.2** Though, flyash utilisation has gained momentum progressively over the years, however, still further efforts required to explore new areas of ash utilisation. With suitable safeguards, mine backfilling including disposal of flyash in abandoned quarries and road construction especially in the Construction of National Highways and Expressways could be the major mode of flyash utilisation in the near future as these areas have vast potential. It would perhaps be desirable that Ministry of Environment & Forests, Government of India with feedbacks from CPCB and other SPCBs takes periodic reviews with the concerned Ministries for sorting out the bottlenecks such as declaring a list of abandoned mines, making adequate provisions in respective schedules for flyash utilisation by the Indian Road Congress & construction agencies etc.

4.0 Current Practice for Handling & Disposal of Flyash & Bottom ash (within the power plant)

Flyash is collected in dry form from ESP hopper and disposed either in dry form or through wet slurry form. While, bottom ash falls from the bottom of the boiler is disposed in wet slurry form into the ash ponds.



Following technologies are conventionally used for handling & disposal of flyash and bottom ash from ESPs Hoppers and Boiler bottom within the plant or upto the ash pond area:

- Pneumatic conveying
- Lean slurry disposal system
- Medium Concentration slurry disposal system
- High Concentration slurry disposal system
- Dry (moist) Conveying system through belt conveyor/tube belt conveyor.

Amongst the above technologies, Pneumatic conveying, Medium Concentration slurry disposal system, High Concentration slurry disposal system, Dry (moist) Conveying system through belt conveyor/tube belt conveyor are recommended.

The dry ash is typically conveyed pneumatically from the ESP or filter fabric Hoppers to storage silos where it is kept dry, pending utilization or further processing, or to a system where the dry ash is mixed with water and conveyed (sluiced) to an on-site storage pond.

The dry ash collected is normally stored and handled using equipment and procedures similar to those used for handling portland cement:

- Fly ash is stored in silos, domes and other bulk storage facilities
- Fly ash can be transferred using air slides, bucket conveyors and screw conveyors, or it can be pneumatically conveyed through pipelines under positive or negative pressure conditions

Dry fly ash collected can also be suitably moistened with water and wetting agents, as applicable, using specialized equipment (conditioned) and hauled in covered dump trucks for such special applications as structural fills. Water conditioned fly ash can also be suitably stockpiled at jobsites. Exposed stockpiled material must be kept moist or suitably covered to prevent fugitive emission.

5.0 Modes for loading, unloading and transportation of flyash, bottom ash & pond ash for utilisation (Outside the power plant)

Existing practices

Flyash is generally transported either from flyash Silo or from ash pond upto distances varying from less than 1 Km to 50 Kms using the following modes of transportation:

- 5.1** Flyash or pond ash is generally transported by tractor trollies or trucks by the brick manufacturers and road construction agencies depending upon the requirement and distance of transport. Loading and unloading of flyash or pond ash is done mechanically which are likely to cause pollution by way of fugitive emission or spillages during loading, unloading and transportation.
- 5.2** As cement plants need dry flyash, some of the power plants earlier made arrangement for loading of flyash in the trucks directly from ESP hoppers which used to cause severe air pollution due to fugitive dust emission. To overcome the fugitive dust emission problem, cement plants thereafter constructed silos for intermediate collection and storage of flyash on their own inside the premises of thermal power plants whereby flyash was transferred directly from ESP hoppers pneumatically and loaded into the trucks through telescopic chute which curbs fugitive emission during loading. As a follow up of the recommendations of CPCB under Corporate Responsibility for Environmental Protection (CREP), thermal power plants subsequently took initiatives to construct silos for intermediate storage of dry flyash and made arrangements for proper loading of flyash to the trucks. Flyash from these silos after loading is transported to the cement plant either by Bulklers or by Trucks covered with tarpaulins.



Photograph showing flyash loading into truck & bulker through telescopic chute avoiding fugitive emission

- 5.3** Flyash is also transported to abandoned mines by trucks covered suitably with tarpaulins. Talcher Thermal Power Plant of NTPC is currently transporting fly ash slurry to the abandoned mine pit through a pipeline to a distance of about 9 kms. However, due to non-availability of abandoned mines, mine backfilling using flyash is being done in very few thermal power plants. As per the 2009 notification, flyash disposal in abandoned mines or quarry should be done

under the guidance of Director General of Mine Safety (DGMS) and the power plant authorities shall regularly monitor the ground water in the surrounding area to assess ground water contamination , if any.

6.0 Environmental issues

During transportation of flyash, fugitive dust emission is bound to arise if proper and adequate measures are not taken. Loading, unloading of flyash in carriage vehicles, movement of vehicles on haulage road if water sprinkling is not resorted to and wheels of vehicles are major sources of fugitive dust emission. Flyash may also become air borne, if trucks/tankers are overfilled, and not adequately covered at top.

7.0 Guidelines for loading, unloading, storage, transportation of flyash

Based on the present modes of flyash utilisation and to augment flyash utilisation in future, the committee is of the view that there is an imperative need to explore future possibilities in other areas which are yet to be exploited to increase flyash utilisation. The power plants need to maximise dry collection of fly ash & bottom ash besides adopting adequate measures to prevent fugitive dust emission during loading, unloading, storage, transportation and various uses of dry ash as well as ash from ash pond. Following guidelines are, therefore, suggested for prevention of pollution and augmentation of flyash utilisation

7.1 Maximise dry collection of fly ash and bottom ash

The implementation of following suggestions depend upon the requirement of end users of flyash/ bottom ash.

- a. Coarse fly ash from **first field** of ESP Hoppers need to be collected and stored separately into the coarse fly ash silo.
- b. Fine flyash from **second field onwards** of ESP Hoppers should be collected separately. For some specific usage, fine flyash may be passed through Classifier for further separation of fine fly ash and stored in separate silo.
- c. Bottom ash which is not utilised presently could also be collected in dry form and converted into a valuable resource if processed to match the end use specification. The dry bottom ash removal and its transportation is certainly more environment friendly, compared to that of wet ash removal and transport system. Wet collection & disposal of bottom ash should be minimised as far as possible .

7.2 Loading, Unloading and Storage

Installation of Bag Filters with dry fly ash collection and storage in Silos at loading and unloading points are standard practices at both locations. Loading at power plant site as well as at the unloading point at user's site. Suggestions for further improvement in existing practices are as under:

- a. Current practice of loading of fly ash in Bulklers / Tankers requires improvement at the stage of loading of fly ash in Tankers. The opening telescopic chutes should be closed and confined to avoid fugitive dust emission .
- b. The Pollution Control Equipment / Cascade Filters, attached with fly ash loading Chute should be periodically cleaned along with regular scheduled maintenance of Bag Filter to avoid choking and malfunctioning of Bag Filter. It would mitigate the dust emission during loading of fly ash.
- c. Malfunctioning of level sensors can be avoided, with regular maintenance, to prevent over filling of fly ash in Tankers.
- d. The Weigh Bridge to be installed under fly ash loading chute to fill just the required quantity of fly ash in Tankers so that rejection and emptying out of fly ash in open areas is avoided which otherwise results in heavy fugitive emission all around.
- e. Opening of Tankers need to be closed and properly locked during transportation of fly ash. Automatic opening / close system need to be installed without fail.
- f. Current practice of unloading of fly ash from Tanker to Storage Hopper through pneumatic system is certainly good. But it has, however, been observed that the leakage of fly ash occur at bends and joints of transportation pipe line. The fly ash being abrasive in nature causes damage at bends and joint locations. Fly ash should , therefore be transported through PVC coated MS pipes to avoid the abrasion otherwise it may lead to leakage of fly ash. The mechanical unloading system should be envisaged to avoid high pressure, more power consumption and dust leakage from unloading pipe lines. As far as possible, number of bends should be minimised.
- g. The fly ash storage silo should to be made up of anti-abrasive or anti corrosive material. It is preferred to provide concrete silo/hopper to avoid leakages.
- h. The bottom ash discharged from boiler bed, may be transported pneumatically in dry form / in slurry form to the ash pond.

- i. Proper functioning of all the level sensor of Storage Hopper has to be ensured to avoid any possible spillage from Hopper opening.
- j. The Bag Filter made of anti-abrasive material/cloth be provided with telescopic chute.
- k. Dumping of ash in Ash pond should be loaded mechanically in moist condition so that the ash doesnot get air borne and pose fugitive dust problem.

7.3 Transportation

Flyash transportation has many challenges like distance to be transported, form of ash i.e. dry or wet ash, user's requirement , economic feasibility , requirement of surrounding vicinity and many more site specific issues. Over and above, in any case control of dust emission during transportation is prime concern and more challenging being a non-point source of pollution and larger area coverage due to movement from one place to other passing through various receptors. As flyash is used by different users for different purpose such as cement manufacturing, brick manufacturing, mine back filling, road construction and filling of low lying area, the handling and transportation have to accordingly suggested. Following modes of transportation and precautions, to avoid fugitive dust emission are, therefore, suggested for different end users of flyash or bottom ash as the case may be:

a. **Cement/ Asbestos manufacturing**

- I. Specially designed Road Tankers/ Bulklers or mechanically designed covered Trucks and provided with automatic loading and unloading through compressor / vacuum pumps mounted on the tankers need only to be used
- II. Special designed railway wagons similar to Bulklers/Tankers need to be used for transportation
- III. Dedicated boats and bargers should only carry flyash containers for transportation of flyash . Specially designed jetty with automatic loading and unloading system for transportation of flyash from silo to container should be developed.

b. **Flyash based Brick, Tiles, Blocks etc. manufacturing:**

- I. Tankers/ Bulklers or mechanically designed covered Trucks need to be used
- II. Tractor trolleys with box type cover on top with hydraulic unloading system need only to be deployed for transportation of dry or wet fly ash, while traversing through habilitated areas otherwise, Tractor trolleys suitably covered with good quality of tarpaulin (made of HDPE) could be allowed to transport flyash for shorter distance say upto a distance of about 10 Kms.

c. Mine/ abandoned quarry back filling

- I. Tankers/ Bulkers or mechanically designed covered Trucks need to be used
- II. Pipe conveyors, wherever feasible, based on the topography of the area should be used.
- III. Thermal Power Plants using wet ash disposal, if permitted can transport ash slurry directly to abandoned mine through ash slurry pipe line.

d. Road construction and filling of low lying area

- I. Tankers/ Bulkers or mechanically designed covered Trucks need to be used.

e. Other miscellaneous purposes

- I. Tankers/ Bulkers or mechanically designed covered Trucks need only to be used

- 7.3.1 The user agency shall obtain prior approval of design of Road Tankers/ Bulkers or mechanically covered Trucks, as the case may be, from the concerned State Pollution Control Board.

In no case, flyash or bottom ash shall be allowed to be transported by open trucks / trollies irrespective of distance or end use.

7.4 Code of Practices for general maintenance of roads, vehicles and conditioning of flyash

- a. Thermal power plants and use agency collectively shall ensure that flyash is transported in environmentally sound manner following the guidelines prescribed by CPCB
- b. Roads inside power plant and that of flyash user agency should be paved and plantation of adequate width should be done at both sides. Mechanised Road Sweepers should be deployed. In addition, adequate arrangements for water sprinkling should be made to suppress fugitive dust emission, if any generated.
- c. Thermal power plants and user agencies should make arrangements (two stages) for washing of wheels of the vehicles (Bulkers/trucks) before they leave out for the main road.

- d. Pond ash to be transported should be conditioned with water to maintain minimum 15% moisture at the disposal point so that ash does not get air borne and cause fugitive emission.
- e. Adequate free board in trucks should be kept to avoid overflow/spillage during transportation.
- f. In case of any spillage enroute during transportation of flyash, the agency shall ensure that spilled ash is collected and transported to the disposal/usage site immediately
- g. All the Bulklers and trucks responsible for carrying flyash should have valid Pollution Under Control certificates.
- h. The speed limit of vehicles carrying flyash should be strictly enforced and in no case same shall exceed 40 km per hour.
- i. State Pollution Control Boardsshall indicate clearly mode of transportation and method of loading and unloading while granting the consent.
- j. Transportation of flyashtrough thicklythrough thickly populated areas populated areas should be avoided as for as possible.
- k. General awareness/ training programmes be organised regularly for tanker operating staff like drivers and cleaners on the impact of hazards of fly ash.



Mechanically designed truck



Small bulkers designed for transportation of flyash by tractors

Central Pollution Control Board

B-33014/7/2013/PCI-II

October 07, 2013

Office Order

Sub: Constitution of the Committee for preparation of "Guidelines for loading, unloading, utilization and nuisance free transportation of all types of flyash, including flyash, bottom ash etc. generated by thermal power stations"-reg

Loading, unloading and transportation of flyash, bottom ash and pond ash may cause fugitive dust emission, if not properly handled or not provided with suitable dust control systems. Therefore, in order to suggest proper ways/ modes for handling and transportation of flyash, bottom ash and pond ash, a Committee with following composition is hereby constituted.

1. Sh T.K. Dhar, Former ED, NTPC	Chairman
2. Director, HSMD, MoEF	Member
3. Representative, CEA	Member
4. Head, Flyash Unit, DST, New Delhi	Member
5. Member Secretary, Orissa Pollution Control Board	Member
6. Member Secretary, Chhattisgarh Environmental Control Board	Member
7. Member Secretary, Andhra Pradesh Pollution Control Board	Member
8. Member Secretary, Maharashtra Pollution Control Board	Member
9. Rep of Ministry of Transport, New Delhi	Member
10. Dr. S.S. Bala, Additional director, I/c PCI-II, CPCB	Member Convenor

Terms & conditions:

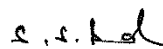
1. To prepare guidelines based on best available environmentally sound practices for loading, unloading, utilization and nuisance free transportation of all types of flyash, including flyash, bottom ash etc. generated by thermal power stations
2. The committee may visit one or two facilities/power plants which might adopted environmentally sound practices for loading, unloading, utilization and nuisance free transportation
3. The Committee will meet as and when required and finalise the guidelines
4. The Committee shall submit its report within 6 weeks.

Pg2-----

5. A sitting fee @ Rs 3000/- day shall be payable to non- official members apart from TA/DA/local conveyance

The expenditure shall be met from the Budget Head No. 09 (Pollution control enforcement) under AAP 2013-14 of CPCB.

This issues with the approval of competent authority.



(Dr. S.S. Bala)

Additional director & I/c PCI-II

TO

All members (as per enclosed list)

Copy to

1. PS to CCB for information of CCB pl.
2. PS to MS – for information of MS pl.
3. Accounts Officer, CPCB

**FINAL REPORT
OF THE
COMMITTEE FOR PREPARATION OF “GUIDELINES
FOR LOADING, UNLOADING AND NUISANCE FREE
TRANSPORTATION OF ALL TYPES OF FLYASH,
INCLUDING BOTTOM ASH ETC. GENERATED BY
THERMAL POWER STATIONS”**



**Central Pollution Control Board
Delhi
December 2013**