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**MINISTRY OF ENVIRONMENT AND FORESTS**

**NOTIFICATION**

New Delhi, the 6<sup>th</sup> November, 2008.

**S.O. 2623 (E).**—Whereas by notification of the Government of India in the Ministry of Environment and Forests number S.O. 763(E), dated the 14<sup>th</sup> September, 1999 (hereinafter referred to as the said notification) issued under sub-section (1) and clause (v) of sub-section (2) of section 3 and section 5 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government, issued directions for restricting the excavation of top soil for manufacture of bricks and promoting the utilisation of fly ash in the manufacture of building materials and in construction activity within a specified radius of one hundred kilometers from coal or lignite based thermal power plants;

And whereas the term “fly ash” means and includes all categories or groups of coal or lignite ash generated at the thermal power plant such as Electrostatic Precipitator (ESP) ash, dry fly ash, bottom ash, pond ash and mound ash. ESP ash and dry fly ash are the components of fly ash collected by ESPs or bag filters or other similar suitable equipment and bottom ash is the ash collected separately at the bottom of the boiler. Pond ash and mound ash are the mixture of ESP ash or dry fly ash and bottom ash;

And whereas there is a need for restricting the excavation of top soil for manufacture of bricks and for other works which involve use of top soil and promoting utilisation of fly ash produced by coal or lignite based thermal power plants including captive power plants and co-generation plants in the manufacture of building materials and construction activity;

And whereas it was observed that there was a gradual increase in the use of fly ash in the manufacture of fly ash bricks or products from about 1.5 million tonne in 2002-2003 to 3.19 million tonne in 2006-2007 which need to be further encouraged for achieving the ultimate objective of conservation of top soil and minimise environmental pollution caused due to fly ash;

And whereas it is observed that construction agencies are yet to achieve their targets of utilization of fly ash based products even after 31<sup>st</sup> August, 2007, the date prescribed for

100% utilisation of fly ash based products in the said notification of 1999. It is also observed that many thermal power stations or plants are also yet to achieve the targets drawn up in their action plans;

And whereas the representations of the brick kiln owners were considered with regard to transporting of fly ash over a long distance and also the logistics involved including the energy cost;

And whereas the issue has been examined by the Government of India in the Ministry of Environment and Forests;

And whereas the Central Government is of the opinion that the said notification should be amended;

And whereas clause (a) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 provides that whenever the Central Government considers that prohibition or restrictions of any industry or carrying on any processes or operation in any area should be imposed, it shall give notice of its intention to do so;

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 and section 5 of the Environment (Protection) Act, 1986, the Central Government proposes to make the following further amendments in the said notification for the information of the public likely to be affected thereby and notice is hereby given that the said draft amendment notification will be taken into consideration on or after the expiry of a period of sixty days from the date on which copies of the Official Gazette, in which this notification is published, are made available to the public.

The objection or suggestion, which may be received from any person with respect to the said draft amendments within the period specified above, will be taken into consideration by the Central Government.

Objections or suggestions, if any, may be addressed to the Secretary, Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, Lodi Raod, New Delhi-110003, or electronically at e-mail address: secymenf@nic.in.

### Draft amendments

1. Throughout the said notification, save as otherwise expressly provided and unless the context otherwise requires, for the word “ash” wherever it occurs, the words “fly ash” shall be substituted.

2. In the said notification, in paragraph 1,—

(a) sub-paragraph (1) shall be omitted;

(b) for sub-paragraphs (1A) and (1B), the following sub-paragraphs shall respectively be substituted, namely:—

“(1A) Every construction agency engaged in the construction of buildings within a radius of hundred kilometers (by road) from a coal or lignite based thermal power plant shall use only fly ash based products for construction, such as: cement/concrete, fly ash bricks or blocks or tiles or clay fly ash bricks, blocks or tiles or cement fly ash bricks or bricks or blocks or similar products or a combination or aggregate of them in every construction project.

(1B) The provisions of sub-paragraph (1A) shall be applicable to all construction agencies of Central or State or Local Government and private or public sector. It shall be the responsibility of the agencies either undertaking construction or approving the design or both to ensure compliance of the provisions of sub-paragraph (1A) and to submit annual returns to the concerned State Pollution Control Board or Pollution Control Committee.”;

(c) after sub-paragraph (1B), the following sub-paragraph shall be inserted, namely:—

“(1C) Minimum fly ash content for building materials or products to qualify as “fly ash based products” category shall be as given in the Table below:

Table

S.No.	Building Materials or Products	Minimum % of fly ash by weight
(1)	(2)	(3)
1.	Fly ash bricks, blocks, tiles, etc. made with fly ash, lime, gypsum, sand, stone dust, cement,	50% of total raw material.

	etc. (without clay).	
2.	Paving blocks, paving tiles, checker tiles, mosaic tiles, roofing sheets, pre-cast elements, etc. wherein cement is used as binder.	Usage of PPC (fly ash) or 20% of OPC content.
3.	Cement.	20% of total raw materials.
4.	Clay based building materials such as bricks, blocks, tiles, etc.	25% of total raw materials.
5.	Concrete, mortar and plaster.	Usage of PPC (fly ash) or 20% of total raw material.

(d) in sub-paragraph (2), for the brackets and number “(1)”, the brackets, number and letter “(1C)” shall be substituted;

(e) for sub-paragraph (2A), the following sub-paragraph shall be substituted, namely:—

“(2A) The concerned State Government or Union territory Government shall be the enforcing and monitoring authority for ensuring compliance of the provisions of sub-paragraph (1A) and (1B).”;

(f) for sub-paragraph (3) and (3A), the following sub-paragraphs shall respectively be substituted, namely:—

“(3) In case of non-availability of fly ash from thermal power plants in sufficient quantities as certified by the said power plants, within 100 km of the site, the stipulation under sub-paragraph (1A) shall be suitably modified (waived or relaxed) by the concerned State Government or Union territory Government level monitoring committee mentioned elsewhere in this notification.

(3A) A decision on the application for manufacture of fly ash bricks, block and tiles and similar other fly ash based products shall be taken within thirty days from the date of receipt of the application by the concerned State Pollution Control Board or Pollution Control Committee.”;

(g) sub-paragraphs (3B), (3C) and (3D) shall be omitted;

(h) for sub-paragraphs (4) and (5), the following sub-paragraphs shall be substituted, namely:—

“(4) Each coal or lignite based thermal power plant shall constitute a dispute settlement committee which shall include the General Manager of the thermal power plant and a representative of the relevant Construction and fly ash Brick Manufacturing Industry Association / Body, as the case may be. Such a Committee shall ensure unhindered loading and transport of fly ash without any undue loss of time. Any unresolved dispute shall be dealt with by the concerned State or Union territory Government level monitoring committee mentioned elsewhere in this notification.

(5) No agency, person or organization shall, within a distance of hundred kilometers (by road) of a thermal power plant undertake construction or approve design for construction of roads or flyover embankments with top soil. The guidelines or specifications issued by the Indian Road Congress (IRC) as contained in IRC specification No. SP: 58 of 2001 regarding use of fly ash shall be followed. Any deviation from this direction can only be agreed to on technical reasons if the same is approved by Chief Engineer (Design) or Engineer-in-Chief of the concerned agency or organisation or on production of a certificate of “fly ash not available” from the thermal power plant(s) (TPPs) located within hundred kilometers of the site of construction. This certificate shall be provided by the TPP within two working days from the date of receipt of a request for fly ash, if fly ash is not available”;

(i) in sub-paragraph (6), for the words “Voids created due to soil borrow area shall be filled up with ash with proper compaction and covered with topsoil kept separately as above. This would be done as an integral part of embankment project within the time schedule of the project”, the words “Voids created at soil borrow area shall be filled up with fly ash with proper compaction and covered with topsoil kept separately as above. This would be done as an integral part of embankment project” shall be substituted;

(j) for sub-paragraph (7), the following sub-paragraphs shall be substituted, namely:—

“(7) No agency, person or organisation shall within a radius of hundred kilometers (by road) of a coal or lignite based thermal power plant undertake or approve or allow reclamation and compaction of low-lying areas with soil. Only fly ash shall be used for compaction and reclamation. They shall also ensure that such reclamation and compaction is done in accordance with the specifications and guidelines laid down by the authorities mentioned in sub-paragraph (1) of paragraph 3.

(8)(i) No person or agency shall within fifty kilometers (by road) from coal or lignite based thermal power plants, undertake or approve stowing of mine without using at least 25% of fly ash on weight to weight basis, of the total stowing materials used and this shall be done under the guidance of the Director General of Mines Safety (DGMS) or Central Mine Planning and Design Institute Limited (CMPDIL):

Provided that such thermal power stations shall facilitate the availability of required quality and quantity of fly ash as may be decided by the expert committee referred in sub-paragraph (10) for this purpose.

(ii) No person or agency shall within fifty kilometers (by road) from coal or lignite based thermal power plants, undertake or approve without using at least 20% of fly ash on volume to volume basis of the total materials used for external dump of overburden and same percentage in upper benches of back filling of opencast mines and this shall be done under the guidance of the Director General of Mines Safety (DGMS) or Central Mine Planning and Design Institute Limited (CMPDIL):

Provided that such thermal power stations shall facilitate the availability of required quality and quantity of fly ash as may be decided by the expert committee referred in sub-paragraph (10) for this purpose.

(9) The provisions contained in clauses (i) and (ii) of sub-paragraph (8) shall be applicable to all mine agencies under Government, public and private sector and to mines of all minerals or metals or items. It shall be the responsibility of agencies either undertaking or approving the backfilling or stowing of mine or both to ensure compliance of provisions contained in clauses (i) and (ii) of sub-paragraph (8) and to submit annual returns to the concerned State Pollution Control Board or Pollution Control Committee and Indian Bureau of Mines (IBM) as applicable.

(10) The Ministry of Coal for this purpose shall constitute an expert committee comprising of representatives from Fly Ash Unit, Department of Science and Technology, Ministry of Science and Technology, Director General of Mines Safety (DGMS), Central Mine Planning and Design Institute Limited (CMPDIL), Ministry of Environment and Forests, Ministry of Power, Ministry of Mines and the Central Institute of Mining and Fuel Research (CIMFR), Dhanbad. The Committee shall also guide and advice the back filling or stowing in

accordance with the Provisions contained in sub-paragraphs (8) and (9) above, and specifications and guidelines laid down by the concerned authorities as mentioned in sub-paragraph (1) of paragraph 3.

(11) The concerned State Government or Union territory Government shall be the enforcing and monitoring authority for ensuring compliance of the provisions of sub-paragraphs (8) and (9)”;

3. in the said notification, in paragraph 2,—

(a) for sub-paragraphs (1), (2) and (3), the following sub-paragraphs shall be substituted, namely:—

“(1) All coal or lignite based thermal power stations would be free to sell fly ash to the user agencies subject to the following conditions, namely:—

(i) The pond ash and mound ash should be made available free of any charge on “as is where is “basis to manufacturers of bricks, blocks or tiles including clay fly ash product manufacturing unit(s), farmers, the Central and the State road construction agencies, Public Works Department, and to agencies engaged in backfilling or stowing of mines.

(ii) At least 20% of dry ESP fly ash shall be made available free of charge to units manufacturing fly ash or clay-fly ash bricks, blocks and tiles on a priority basis over other users. If the demand from such agencies falls short of 20% of quantity, the balance quantity can be sold or disposed of by the power station as may be possible:

Provided that the fly ash obtained from the thermal power station should be utilized only for the purpose for which it was obtained from the thermal power station or plant failing which no fly ash shall be made available to the defaulting users.

(2) All coal and, or lignite based thermal power stations and, or expansion units in operation before the date of this notification are to achieve the target of fly ash utilization as per the table given below:

**Table**

S.No.	Percentage Utilization of Fly Ash	Target Date
(1)	(2)	(3)
1.	At least 50% of fly ash generation	One year from the date of issue of this notification.
2.	At least 65% of fly ash generation	Two years from the date of issue of this notification.
3.	At least 85% of fly ash generation	Three years from the date of issue of this notification.
4.	100% fly ash generation	Four years from the date of issue of this notification.

The unutilized fly ash in relation to the target during a year, if any, shall be utilized within next two years in addition to the targets stipulated for those years. The balance unutilized fly ash accumulated during first four years (the difference between the generation and the utilization target) shall be utilized progressively over next five years in addition to 100% utilization of current generation of fly ash.

(3) New coal and, or lignite based thermal power stations and, or expansion units commissioned after this notification to achieve the target of fly ash utilization as per table given below:

**Table**

S.No.	Fly ash utilization level	Target date
(1)	(2)	(3)
1.	At least 50% of fly ash generation	One year from the date of commissioning.
2.	At least 75% of fly ash generation	Two years from the date of commissioning.
3.	100% of fly ash generation	Three years from the date of commissioning.

The unutilized fly ash in relation to the target during a year, if any, shall be utilized within next two years in addition to the targets stipulated for these years. The unutilized fly ash accumulated during first three years (the difference between the generation and utilization target) shall be utilized progressively over next five years in addition to 100% utilization of current generation of fly ash.”;



(b) in sub-paragraph (4), for the words “six months”, the words “four months” shall be substituted;

(c) for sub-paragraph (6), the following sub-paragraphs shall be substituted, namely:—

“(6) The amount collected from sale of fly ash and fly ash based products by coal and/or lignite based thermal power stations or their subsidiary or sister concern unit, as applicable should be kept in a separate account head and shall be utilized only for development of infrastructure or facilities and promotion/facilitation activities for use of fly ash until 100 percent fly ash utilization level is achieved. Thereafter as long as 100% fly ash utilization levels are maintained, the thermal power station would be free to utilize the amount collected for other development programmes also. In case, there is a reduction in the fly ash utilization levels in the subsequent year(s), the use of financial return from fly ash shall get restricted to development of infrastructure or facilities and promotion or facilitation activities for fly ash utilization until 100 percent fly ash utilization level is again achieved and maintained.

(7) Annual implementation report (for the period 1<sup>st</sup> April to 31<sup>st</sup> March) providing information about the compliance of provisions in this notification shall be submitted by the 30<sup>th</sup> day of April, every year to the Central Pollution Control Board, concerned State Pollution Control Board or Committee and the concerned Regional Office of the Ministry of Environment and Forests by the coal or lignite based thermal power plants, and also be made a part of the annual report of the thermal power plant as well as thermal power plant wise information be provided in the annual report of thermal power producing agency owning more than one thermal power plant.”;

4. in the said notification, in paragraph 3,—

(a) in sub-paragraph (2), for the words “schedules of specifications and construction applications, including appropriate standards and codes of practice, within a period of four months from the publication of this notification”, the words “tender documents, schedules of specifications and construction applications including appropriate standards and codes of practice with immediate effect” shall be substituted;

(b) for sub-paragraph (2A), the following sub-paragraph shall be substituted, namely:—

“(2A) Building construction agencies both in public and private shall prescribe the use of fly ash and fly ash-based products in their respective tender documents, schedules of specifications and construction applications, including appropriate standards and codes of practice and make provisions for the use of fly ash and fly ash based bricks, blocks or tiles or aggregates of them in the schedule of approved materials and rates immediately.”;

(c) for sub-paragraphs (2B) and (3), the following sub-paragraphs shall be substituted, namely:—

“(2B) All agencies undertaking construction of roads or fly over bridges and reclamation and compaction of low lying areas, including Department of Road Transport and Highways (DORTH), National Highways Authority of India (NHAI), Central Public Works Department (CPWD), State Public Works Departments and other State Government Agencies, shall with immediate effect—

- a. make provisions in their tender documents, schedules of approved materials and rates as well as technical documents for implementation of this notification, including those relating to soil borrow area or pit as per sub-paragraph (7) of paragraph 1; and
- b. make necessary specifications or guidelines for road or fly over embankments that are not covered by the specifications laid down by the Indian Road Congress (IRC).

(3) All local authorities shall specify in their respective tender documents, building bye-laws and regulations, the use of fly ash and fly ash-based products and construction techniques in building materials, roads embankments or for any usage with immediate effect.

(4) The Central Electricity Authority and other approving agencies may permit the land area for emergency ash pond or fly ash storage area up to 40 hectares for a 500 MW unit, based on 45% ash content coal, or in the same proportion for units in other capacities taking into account the ash content in coal or lignite to be used.

(5) All Financial institutions and agencies which fund construction activities shall include a clause in their loan or grant document for compliance of the provisions of this notification.

(6) A Monitoring committee shall be constituted by the Central Government with members from Ministry of Coal, Central Pollution Control Board, Central Electricity Authority, Head Fly Ash Unit of Department of Science and Technology and Building Material Technology Promotion Council to monitor the implementation of the provisions of the notification and submit its recommendations or observations at least once in every six months to the Secretary, Ministry of Environment and Forests. Concerned Advisor or Joint Secretary in the Ministry of Environment and Forests will be the convener of this committee.

(7) For the purpose of monitoring the implementation of the provisions of the notification the State Governments or Union territory Government shall constitute a monitoring committee within three months from the date of issue of this notification under the chairmanship of Secretary, Department of Environment with representatives from Department of Power, Department of Mining, Road and Building Construction Department and State Pollution Control Board. This committee would deal with any unresolved issue by dispute settlement committee as prescribed in sub-paragraph (4) of paragraph 1, in addition to monitoring and facilitating implementation of this notification at the respective State Government or Union territory level. This committee would also be empowered to suitably modify (waive or relax) the stipulation under sub-paragraph (1) in case of non-availability of fly ash in sufficient quantities from thermal power plant as certified by the said power plant. The Committee will meet at least once in every quarter.

**[File No. 9-8/2005-HSMD]**

**[G.V. Subrahmanyam]  
Scientist 'G'**

Foot Note.— The principal notification was published in the Gazette of India, Part II, Section 3, Sub-section (ii) vide notification number S.O. 763(E), dated the 14<sup>th</sup> September, 1999 and was amended vide notification number S.O. 979(E) dated the 27<sup>th</sup> August, 2003.