

**BEFORE THE NATIONAL GREEN TRIBUNAL PRINCIPAL BENCH,
NEW DELHI**

Original Application No. 327/2022

IN THE MATTER OF:

Amaravati Fly Ash Bricks

Manufacturers Association

...Applicants

Versus

Union of India & Ors.

...Respondents

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Dated : *11.11.2022*

Place: New Delhi

THROUGH



GIGI C. GOERGE
ADVOCATE
FOR RESPONDENT No. 4 (Ministry of Power, UOI)
CHAMBER NO.457, LAWYER BLOCK-1
DELHI HIGH COURT, NEW DELHI
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**BEFORE THE NATIONAL GREEN TRIBUNAL
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Original Application No. 327 of 2022

Amaravati Fly Ash Bricks Manufacturers

Association

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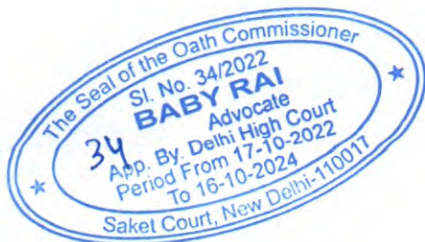
Union of India & Ors

.....Respondents

**ADDITIONAL AFFIDAVIT ON BEHALF OF RESPONDENT
NO. 4 (MINISTRY OF POWER, UNION OF INDIA)**

I, Piyush Singh S/o Sh. Surendra Pal Singh, Address at B-2, Type-6A, 2nd Floor, NBCC Tower-6, East Kidwai Nagar, New Delhi - 110023 aged 46 years, do hereby solemnly affirm and sincerely state as follows:

1. That I am working as Joint Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi and I am fully conversant with the facts based on the records and I am also authorized to file this reply affidavit on behalf of the Respondent No. 4/Ministry of Power.
2. That the Deponent is filing this Affidavit, in compliance of the direction by this Hon'ble Tribunal vide order dated 25.08.2022 in O.A. No. 327 of 2022.
3. That the averments in this Affidavit are solely in order to most humbly set out the facts and bring to the gracious notice of this Hon'ble Tribunal.
4. That the Deponent craves liberty to raise any further submissions or file additional Affidavits, if need arises, during the course of arguments.



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5. That the deponent most humbly states and submits before the Hon'ble Tribunal:

- i. That the primary objective of Ministry of Power has always been to ensure 100 percent utilisation of ash with least burden on the electricity consumers. With this objective, Ministry of Power issued the advisory dated 22.02.2022 (**Annexure-R1**) prescribing therein step-wise procedure to ensure 100% utilization of ash and at the same time to keep the burden on electricity consumers at a bare minimum. The Advisory of the Ministry needs to be seen in totality. Para 5 of the Advisory gives steps to be followed. The petitioner has tried to mislead the Hon'ble Court.
- ii. That as per the Central Electricity Authority (CEA) report on fly ash generation and utilization, it can be seen that the ash Utilization is increasing on yearly basis from 9.63% in 1996-97 to 95.95% in 2021-22. Further, there is an increasing trend in the utilisation of fly ash during the period 1999-2021, as depicted in the graph annexed at **Annexure-R-2**. Over the last 8 years i.e. from 2014-2015 to 2021-22 the ash utilization has increased from 55.69% to 95.95%. In the last 3 years i.e. from 2019-20 to 2021-22, the utilisation level has increased from 83.28% to 95.95%.

This clearly shows that we are moving rapidly to achieve our goal of achieving 100% utilisation of ash. However, we are not yet satisfied. We want 100 percent utilisation. We have ascertained the reason for non-utilisation of 4 percent. This is primarily of pit-head plants. While there is a great demand of ash from user agencies near the non-pithead plants, the problem in utilisation lies with the pithead plants which are located near coal mines and demand of ash from user agencies is less compared to the supply in these areas. Ministry of Power has taken up the matter with Ministry of Coal for identification of abandoned mine voids in the adjoining areas to be back-filled using ash which has not been utilised at the pithead plants.

It is with this objective to ensure 100% ash utilisation and as far as possible keeping the financial burden on end consumers at bare minimum, Ministry of



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own cost. Not having a transparent method of allocation for Fly Ash leads to complaints. It may also be noted that any expenditure on disposal of fly ash leads to higher costs of power generation leading to higher electricity tariff for the consumers. Therefore, in order to reduce burden on electricity consumer, it has been provided that those who take the fly ash at their own cost are given priority. Any Fly ash which is not disposed off in this manner is transported to the user at the cost of electricity consumer.

iii. Having highest regard on the decisions of the Hon'ble Tribunal, it was agreed in Ministry of Power that the Advisory issued to Thermal Power Plants (TPPs) on 22.09.2021 shall not be enforced. The aforesaid Hon'ble NGT's Order along with the Statutory Notification issued by Ministry of Environment, Forest & Climate Change (MoEF&CC) on 31.12.2021 (**Annexure-R3**) was examined in detail in the Ministry of Power in consultation with Central Electricity Authority (CEA). Regarding the MoEF&CC's Notification dated 31.12.2021, the following was interpreted:

- a. The said notification of MoEF&CC, has clearly set out firm time lines for all the Thermal Power Plants in the **country to meet the target of 100% utilization of 'ash'**. In case of non-compliance to meet the specified timelines on utilisation of ash, there are penal provisions for the Thermal Power Plants.
- b. Further, clause B(1) of MoEF&CC's notification dated 31.12.2021 states that:

*".....Provided further that thermal power plant may charge for ash cost and transportation as per **mutually agreed terms**, in case thermal power plant is able to dispose the ash through other means and those agencies makes a request for it and the provisions of ash free of cost and free transportation shall be applicable, if thermal power plant serves a notice on the construction agency for the same."*



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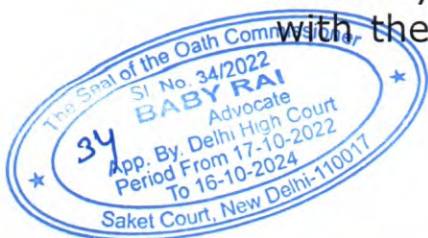
Notification, before free distribution to users and that the notification does not bar TPPs from disposing of the fly ash through a competitive bidding process to user agencies and that is the only procedure to avoid allegation of favouritism. The requirement is for speedy disposal of fly ash by TPPs.

- c. Para A (10) of the MoEF&CC's Notification dated 31.12.2021 has stipulated as follows:

"Statutory obligation of 100 percent utilization of ash shall be treated as a change in law, wherever applicable."

Therefore, the cost of disposal/utilisation of ash is borne by the consumers in the form of higher tariff. Therefore, in view of the higher demand of fly ash in various parts of the country, it was considered appropriate to advise Thermal Power Plants that while utilising the ash as per the timelines given in the MoEF&CC Notification dated 31.12.2021, attempts should be made by Thermal Power Plants to first monetise the sale of ash through competitive bidding route – the receipts therefrom go to reduce the cost of power generation and the electricity tariff to the consumers. However, when Fly Ash is left unsold, it is to be given free of cost to the user agencies as stipulated in the MoEF&CC Notification dated 31.12.2021. A need was felt to streamline the procedure to dispose of the ash by TPPs in a **transparent manner, avoid malpractices** in distribution of ash at the plant level and also to **monetize the sale of ash** so as to **reduce the tariff burden** on the consumers.

- iv. Accordingly, it was further interpreted that it is important that the statutory obligations contained in the notification dated 31.12.2021 shall not to be diluted in any manner and accordingly, it was decided in Ministry of Power to issue 'altogether' a new Advisory dated 22.02.2022 (**Annexure-R1**) (in line with the MoEF&CC's Notification dated 31.12.2021 and



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title "**Supply of Ash to the prospective user agencies as stipulated in the MoEF&CC's Notification dated 31.12.2021 by the power plants to increase Ash Utilization generated by Thermal Power Plants (TPPs)**" suggesting TPPs for the following procedure (para 5.1 to 5.7 below) in disposal of ash for all the **new commitments** entered into after 22.02.2022:

5.1 The Power Plants shall provide ash to user agencies as stipulated in the MoEF&CC's Notification dated 31.12.2021 through a transparent bidding process only.

- The primary objective of introducing this mechanism of ash disposal is that ash has become a valuable commodity as it is used in many manufacturing sectors like cement, brick, tiles etc and is highly demanded in these sectors. Over the years, the uptake and utilisation of ash have increased manifold which is evident from the cost which NTPC has discovered through the bidding process. For instance the entire offered quantity of Dry Fly Ash (5 LMT-Lakh Metric Tonne) at Dadri Station has been tied up at Rs.775-786/MT. Dry fly ash is mostly used in the cement industry which is the largest user agency for taking dry fly ash.

Overall, out of offered quantity, NTPC have got 49.05% dry fly ash tied up with quoted rate ranged from Rs. 01 to 786/MT of Dry Fly Ash and 16.76% of pond ash tied up @ Rs. 01/- to Rs.404/-. Anticipated Revenue from sale of dry fly ash and pond ash is estimated to be Rs. 400 and Rs. 200 Cr respectively.

Such higher discovered prices of ash indicate that the user agencies are not only willing to pay for the cost of the ash and are also ready to bear its transportation charges. In fact the demand received in the recent past from various user agencies is so high, that even for the committed contracts; NTPC is unable to provide committed or enhanced ash quantity. The issue



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5.2 If after bidding/auction, some quantities of ash still remains un-utilized, then it is to be given free of cost on first come first serve basis if the user agency is willing to bear transportation cost.

5.3 If the ash remains un-utilized even after the steps taken in paras 5.1 to 5.2 above, TPPs shall bear the cost of transportation of ash to be provided free to the eligible projects/mine owners.

The cost incurred by NTPC on providing free transportation of fly ash is mentioned as follows:

FY	Net Cost incurred in transportation in Crores
18-19	179.28
19-20	651.73
20-21	1004.88
21-22	1440.43

It is evident from the above mentioned details that the objective of Ministry of Power to minimise the burden on end consumers has still not been achieved as NTPC alone spent Rs.1440.43 crores on transportation of ash to user agencies. The burden of such transportation cost falls on the shoulders of the electricity consumers i.e. the common man.

5.4 The advisory at para 5.4 provides that even after steps taken in Para 5.1 to 5.3 above, if the ash remains un-utilized, TPPs shall serve notice on the construction agencies/mine owner located within 300 kms from TPPs to use ash mandatorily in their projects /filling of mine voids.

5.5 The Ash shall be offered to the prospective user agencies as stipulated in the MoEF&CC's Notification dated 31.12.2021, on competing demand basis, i.e. user agency who offers the highest price and meets the transportation cost will be offered the ash on priority. This will reduce the tariff of electricity and burden on the consumers. It will also be in accordance with sound vigilance practices.

5.6 The power plant may offer Ash subject to their



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lower Ash utilization shall make all efforts to increase its Ash Utilization.

5.7 In case, ash is provided free of cost and free transportation; prospective consumers shall be obliged to source the Ash from the nearest TPPs, to reduce the cost of ash transportation. If the nearest TPP refuses to do so, the prospective consumers shall approach Ministry of Power for appropriate directions.

Further, to facilitate even small and medium commercial enterprises to take part in the bid process, TPPs were advised to invite open bids by keeping a lower bid threshold of minimum 50 tonnes.

- v. That the answering Respondent i.e. Respondent No. 4, Ministry of Power, Union of India has already filed its reply Affidavit affirmed dated 01.08.2022 (**Annexure-R4**) and affirmed that in the instant matter wherein the objective of issuance of the impugned Advisory dated 22.02.2022 was submitted in detail before the Hon'ble Tribunal and not repeated herein in this Affidavit.
- vi. Setting up of a power plant is a de-licensed activity as per the Electricity Act, 2003. Utilities take their own techno-economic and commercial decisions in running their plants in a viable manner. It is stated that the Thermal Power Plants selling power to distribution licensee are under the regulatory jurisdiction of Appropriate Electricity Regulatory Commission as per the Electricity Act 2003 and any expense which is pass through is being scrutinized by them.
- vii. It is stated that Fly Ash Management and Utilization Mission has been constituted by MoEF&CC (**Annexure-R5**). The Ministry of Power supports MoEF&CC on the activities of the Mission as formulated by MoEF&CC from time to time.
- viii. Thermal Power Plants are obliged to report data on utilization of ash in compliance to MoEF&CC Notification dated 31.12.2021. Further, in the new notification there is a mention of mandatory audit by CPCB certified/ appointed auditors.



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- x. As per Para B(5)(i) of the new MoEF&CC Notification dated 31.12.2021, a **Committee** has been constituted and headed by Chairperson, Central Pollution Control Board (CPCB) with representatives from Ministry of Environment, Forest and Climate Change, Ministry of Power (MoP), Ministry of Mines, Ministry of Coal, Director General of Mine Safety and Indian Bureau of Mines for **identification of mines for backfilling of mine voids** with ash or mixing of ash with overburden dump including examination of safety, feasibility (not economic feasibility) and aspects of environmental contamination. As decided in the first meeting of this Committee and request of the Ministry of Coal, MoP had requested CPCB to request Ministry of Coal to constitute the **Central Level Working Group** under their Chairmanship to decide the allocation of coal mines and non-coal mines (major minerals) which are available for ash disposal to power plants based on proximity, better mode of transport, size of power plant vis-a-vis mine.
- xi. Central Electricity Authority has recently proposed 'Draft Guidelines on Design Construction, O&M and Annual Certification of Coal Ash Ponds', which are in an advanced stage of finalization. These Guidelines are for management of legacy fly ash in the ash ponds, optimum design of ash ponds Dykes and Bunds and Annual Certification of these ash ponds. The Guidelines will ensure optimum storage of fly ash in ash ponds, reduced pumping cost, cost of water, wear and tear of ash pumping machines and pond maintenance cost etc. These guidelines once issued have to be adhered to by the TPPs which will ensure that fly ash is not unnecessarily dumped for O&M of fly ash ponds.

6. The impugned letter dated 22.02.2022 was issued with the sole purpose of ensuring the much needed speedy utilisation/disposal of ash (current as well as legacy ash) within the timelines stipulated in the MoEF&CC's Notification, and at the same time, ensuring transparency in distribution of ash at the plant level. Further, where any ash remains unsold, Thermal Power Plants are advised to provide it free and also meet the transportation cost. The averments made in the above paras shows that significant developments in

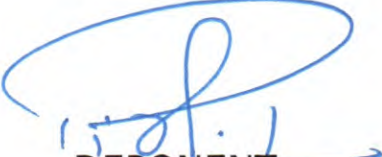


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all the orders of this Hon'ble Tribunal in their letter and spirit.

7. That in view of the submissions made above, the Deponent most humbly submits that the efforts had all along been made with a bonafide intention and the Respondent No. 4 will abide by any directions or orders issued by the this Hon'ble Tribunal.

11 NOV 2022


DEPONENT

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विद्युत मंत्रालय / Ministry of Power
भारत सरकार / Government of India
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VERIFICATION

I, Piyush Singh, the above named Deponent, do hereby state that the facts stated above are true and correct to the best of my knowledge and belief and nothing material has been concealed therefrom.

11 NOV 2022

Verified at New Delhi on this 11th day of November, 2022.



CERTIFIED THAT THE DEPONENT

Shri/Smt./km. Piyush Singh
S/o, W/o, D/o. S.P. Singh
R/o. M.D-23
Identified by Adv. G. Jageorge
Has Sole 34
Delhi. 34
That the Content of this Affidavit which have been & Explained to him are True and correct to the Knowledge of Baby Rai
Oath Commissioner Delhi


DEPONENT

पीयूष सिंह / PIYUSH SINGH
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विद्युत मंत्रालय / Ministry of Power
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11 NOV 2022



No. 9/7/2011-St. Th. (Vol. IV)

Government of India

Ministry of Power

'F' Wing, Nirman Bhawan,
New Delhi, 22nd February, 2022

To,

- i. CMD/MD of coal/lignite based Thermal Power Plants(Central/State/Private)
- ii. Principal Secretary (Power/Energy) of All States/UTs
- iii. Chairperson, Central Electricity Authority,

Sub: Supply of Ash to the prospective user agencies as stipulated in the MoEF&CC Notification dated 31.12.2021 by the power plants to increase Ash utilization generated by Thermal Power Plants (TPPs).

Sir,

Ministry of Environment, Forest & Climate Change in super-session of the erstwhile Ministry of Environment and Forest Notification S.O. 763(E), dated the 14th September 1999 issued under the Environment (Protection) Act, 1986 has now issued a new Notification S.O. 5481(E) dated 31st December, 2021 on ash utilization from coal or lignite based Thermal Power Plants.

2. As per the relevant clause B(1) of the said Notification dated 31.12.2021 (copy attached), thermal power plants may charge for ash cost and transportation, in case the thermal power plant is able to dispose the ash through other means. The provisions of ash free of cost and free transportation is to be applicable; only if the thermal power plant serves a notice on the construction agencies/mine owner for the same.

3. It is pertinent to note that the objective of the Government is to provide **affordable power to consumers**. Any Extra costs without making efforts to monetize disposal of ash by TPPs lead to increase in electricity tariff, which is to be borne by the consumers.

4. Ash is emerging as a valuable commodity and so giving it free, and also meeting the transportation costs will lead to **malpractices**. Therefore, providing such a valuable commodity through bidding process would help in providing the cheaper power to the consumers. In order to maintain transparency and to restrict malpractices, competitive bidding process is the most suitable method to determine the rate of supply of goods and services. Therefore, it is necessary to streamline the procedure to dispose off the ash by TPPs in a transparent manner and also to monetize the sale of ash so as to reduce the tariff burden on the consumers.

5. In view of above, all coal/lignite based TPPs are hereby advised to provide Ash to the prospective user agencies for all new commitments for supply of Ash as per following guidelines which have been framed in accordance with MoEF&CC Notification dated 31.12.2021:-

Procedure to be followed to dispose of ash:

5.1 The Power plants shall provide ash to user agencies as stipulated in the MoEF&CC Notification dated 31.12.2021 through a transparent bidding process only.

5.2 If after bidding/ auction some quantities of ash still remains un-utilized, then only, as one of the options, it could be considered to be given free of cost on first come first serve basis, if the user agency is willing to bear the transportation cost.

5.3 If ash remains un-utilized even after the steps taken in paras 5.1 and 5.2 above, TPP shall bear the cost of transportation of ash to be provided free to the eligible projects/mine owners.

5.4 Even after steps taken in Paras 5.1 to 5.3 above, if the ash remains un-utilized, TPPs shall serve notice on the construction agencies/mine owners located within 300 kms from TPPs to use ash mandatorily in their projects /filling of mine voids.

5.5 The Ash shall be offered to the prospective user agencies as stipulated in the MoEF&CC Notification dated 31.12.2021 on competing demand basis, i.e. user agency who offers the highest price and meets the transportation cost will be offered the ash on priority. This will reduce the tariff of electricity and burden on the consumers. It will also be in accordance with sound vigilance practices.

5.6 The power plant may offer Ash subject to their technical restrictions such as precautions required for Dyke stability and safety etc. The power plants having lower Ash utilization shall make all efforts to increase its Ash Utilization.

5.7 In case, ash is provided free of cost and free transportation; prospective consumers shall be obliged to source the Ash from the nearest TPPs, to reduce the cost of ash transportation. If the nearest TPP refuses to do so, the prospective consumers shall approach Ministry of Power for appropriate directions.

Procedure to be followed for transportation cost to be borne by TPPs:

5.8 The transportation cost wherever required to be borne by the TPPs, shall be discovered on a competitive bidding process basis only. TPPs shall prepare a panel of transportation agencies every year based on competitive bidding for transportation in slabs of 50 Kms, which may be used for the period. The TPPs shall call for bids well in advance, so that the transportation panel is in place as soon as the previous panel expires. There should be no gap between the expiry of existing panel and the finalization of the fresh panel.

5.9 TPPs are advised to invite open bids by keeping a lower bid threshold of minimum 50 tonnes so that even small and medium commercial enterprises can also take part in the bid process.

6. The Appropriate Commission shall scrutinize any expenses regarding ash utilization proposed to be passed through in tariff by the Generation Company in accordance with these guidelines to ensure that the least possible burden is passed on to electricity consumers and full transparency is ensured by Generating Company as envisaged in these Guidelines.

7. **Applicability of this Advisory:** This advisory may be followed by every coal or lignite based TPP (i.e including captive or co-generating stations or both), mentioned at para A(1) of the MOEF&CC notification dated 31.12.2021. Further, it is clarified that above guidelines apply **prospectively**. TPPs are advised to honour their existing commitments of selling/ transportation of fly ash on the basis of rates arrived through a transparent competitive bidding/ State Schedule of rates only, till the expiry of their existing commitment. For the remaining quantity and new commitments, both fly ash and pond ash shall invariably be disposed off through a transparent bid process.

8. This letter supersedes the earlier letters issued in this regard vide File No 9/7/2011-S.Th (Vol. IV) dated 22.09.2021 and File No 9/7/2011-S.Th(Vol. IV) dated 08.11.2021.

9. All concerned are requested to take necessary action in this regard.

10. This issues with the approval of Hon'ble Minister for Power, New & Renewable Energy.

Enclosed: As above


(Aravind Kumar)

Deputy Secretary to the Govt. of India
Tel: 2371 4367

Copy to:

- i. Secretary (MoEF&CC), Government of India
- ii. Secretary (MoRTH), Government of India
- iii. Secretary (MoHUA), Government of India
- iv. All Chief Secretaries of States/ Union Territories
- v. Secretary, CERC
- vi. Secretaries of all SERCs/JERCs

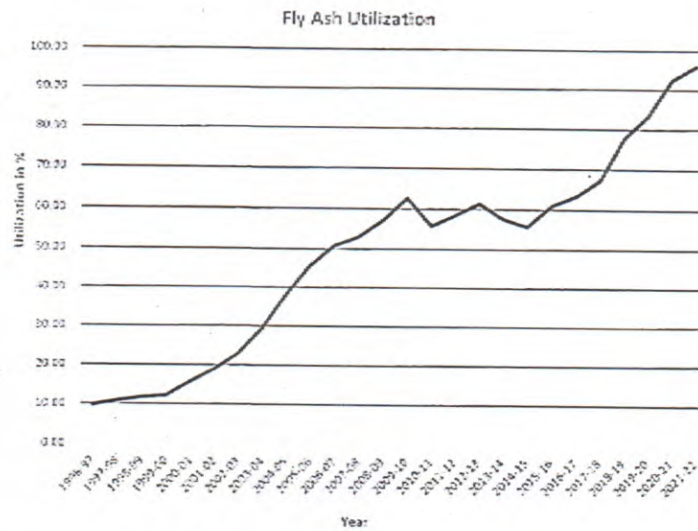
Copy for kind information to:

PS to MoP& NRE, PS to MoSP, Sr PPS to Secretary (Power), All Additional Secretaries/Joint Secretaries/E^A/CE(Thermal), Directors/DS, MoP

Annexure 1

13

Year	Total Fly Ash Generated/Utilized in %
1996-97	9.63
1997-98	10.80
1998-99	11.70
1999-00	12.03
2000-01	13.70
2001-02	18.80
2002-03	22.68
2003-04	29.39
2004-05	38.04
2005-06	45.69
2006-07	50.86
2007-08	53.00
2008-09	57.11
2009-10	62.60
2010-11	65.79
2011-12	65.48
2012-13	61.37
2013-14	57.63
2014-15	55.69
2015-16	60.97
2016-17	63.28
2017-18	67.13
2018-19	77.56
2019-20	83.28
2020-21	92.41
2021-22	95.99



Based on the Data compiled from various Thermal Power Plants on yearly Basis in CEA, MoP

Tarm

PROGRESSIVE FLY ASH GENERATION AND ITS UTILIZATION DURING THE PERIOD FROM 1996-97 TO 2021-22

Sl No.	Year	No. of TPS who provided data	Fly Ash Generation (Million-tonnes)	Fly Ash Utilization (Million-tonnes)	Fly Ash Utilization in Percentage (%)
(1)	(2)	(3)	(4)	(5)	(6)
1	1996-97	-	68.88	6.64	9.63
2	1997-98	-	78.06	8.43	10.8
3	1998-99	-	78.99	9.22	11.7
4	1999-2000	-	74.03	8.91	12.03
5	2000-01	-	86.29	13.54	15.7
6	2001-02	-	82.81	15.57	18.8
7	2002-03	-	91.65	20.79	22.68
8	2003-04	-	96.28	28.29	29.39
9	2004-05	-	98.57	37.49	38.04
10	2005-06	-	98.97	45.22	45.69
11	2006-07	-	108.15	55.01	50.86
12	2007-08	-	116.94	61.98	53
13	2008-09	-	116.69	66.64	57.11
14	2009-10	-	123.54	77.33	62.6
15	2010-11	88	131.09	73.13	55.79
16	2011-12	124	145.41	85.05	58.48
17	2012-13	138	163.56	100.37	61.37
18	2013-14	143	172.87	99.62	57.63
19	2014-15	145	184.14	102.54	55.69
20	2015-16	151	176.74	107.77	60.97
21	2016-17	155	169.25	107.1	63.28
22	2017-18	167	196.44	131.87	67.13
23	2018-19	195	217.04	168.4	77.59
24	2019-20	197	226.95	189.01	83.28
25	2020-21	202	232.56	214.91	92.41
26	2021-22	200	270.82	259.86	95.95

Note:

1. Ash Utilization is gradually increasing on yearly basis from 9.63% in 1996-97 to 95.95% in 2021-22 in general.
2. The Ash utilization increase is consistent except for few years when it decreased marginally before it started increasing again.
3. Over the last 8 years i.e. from 2014-2015 to 2021-22 the ash utilization has increased significantly from 55.69% to 95.95%

	सीमेंट शीट या पाइप या बोर्ड या पैनल):			
	ii. सीमेंट विनिर्माण:			
	iii. रेडी मिक्स कंक्रीट:			
	iv. राख और जीओ-पॉलिमर आधारित निर्माण सामग्री:			
	v. सिंटेड या कोल्ड बॉन्डेड राख एग्रीगेट का निर्माण:			
	vi. सड़कों, सड़क और फ्लाई ओवर के पुश्तों का निर्माण:			
	vii. बांधों का निर्माण:			
	viii. निम्न भू-क्षेत्र का भराव:			
	ix. खनिज क्षेत्रों का भराव:			
	x. अधिभार वाले डम्पों में उपयोग:			
	xi. कृषि:			
	xii. तटीय जिलों में तटरेखा सुरक्षा संरचनाओं का निर्माण:			
	xiii. अन्य देशों को राख का निर्यात			
	xiv. अन्य (कृपया विनिर्दिष्ट करें):			
20.	सार :			
	व्यौरा	सृजित मात्रा (एमटीपी)	उपयोग की गई मात्रा (एमटीपी) और (%)	शेष मात्रा (एमटीपी)
	रिपोर्टिंग की अवधि के दौरान राख			
	पुरानी राख			
	कुल			
21.	कोई अन्य सूचना : वार्षिक अनुपालन रिपोर्ट, और विद्युत संयंत्रों और राख कुण्डों की शेष फाइलों की सॉफ्ट कॉपी ई-मेल:- moefcc-coalash@gov.in पर भेजी जाए।			
22.	प्राधिकृत हस्ताक्षरकर्ता के हस्ताक्षर			

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 31st December, 2021

S.O. 5481(E).—Whereas by notification of the Government of India in the erstwhile Ministry of Environment and Forests vide S.O. 763 (E), dated the 14th September, 1999, as amended from time to time, the Central Government, issued directions for restricting the excavation of top soil for manufacturing of bricks and promoting the utilisation of fly ash in the manufacturing of building materials and in construction activity within a specified radius of three hundred kilometres from the coal or lignite based thermal power plants;

And whereas, to implement the aforesaid notification more effectively based on the polluter pays principle (PPP) thereby ensuring 100 per cent utilisation of fly ash by the coal or lignite based thermal power plants and for the sustainability of the fly ash management system, the Central Government reviewed the existing notification; and whereas environmental compensation needs to be introduced based on the polluter pays principle;

And whereas, there is a need to conserve top soil by promoting manufacture and mandating use of ash based products and building materials in the construction sector;

And whereas, there is a need to conserve top soil and natural resources by promoting utilisation of ash in road laying, road and flyover embankments, shoreline protection measures, low lying areas of approved projects, backfilling of mines, as an alternative for filling of earthen materials;

And whereas, it is necessary to protect the environment and prevent the dumping and disposal of fly ash discharged from coal or lignite based thermal power plants on land;

And whereas, in the said notification the phrase 'ash', has been used which includes both fly ash as well as bottom ash generated from the Coal or Lignite based thermal power plants;

And whereas, the Central Government intends to bring out a comprehensive framework for ash utilisation including system of environmental compensation based on polluter pays principle;

And whereas, a draft notification on ash utilisation by coal or lignite thermal power plants in supersession of the notification of the Government of India, Ministry of Environment and Forests published in the Gazette of India, Extra Ordinary part II, section 3, sub-section (i) *vide* S.O.763 (E), dated the 14th September, 1999, by notification in exercise of the powers conferred under sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule (5) of the Environment (Protection) Rules, 1986, was published in the Gazette of India, Extraordinary, Part II, section 3, sub-section (i), *vide* G.S.R. 285(E), dated the 22nd April, 2021 inviting objections and suggestions from all persons likely to be affected thereby before the expiry of sixty days from the date on which copies of the Gazette containing the said draft provisions were made available to the public;

And, whereas all the objections and suggestions received from all persons likely to be affected thereby in respect of the said draft notification have been duly considered by the Central Government;

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule (5) of the Environment (Protection) Rules, 1986, and in supersession of the Notification S.O.763 (E), dated the 14th September, 1999 except as respect things done or omitted to be done before such supersession, the Central Government hereby issues the following notification on ash utilisation from coal or lignite thermal power plants which shall come into force on the date of the publication of this notification, namely:-

A. Responsibilities of thermal power plants to dispose fly ash and bottom ash.—

- (1) Every coal or lignite based thermal power plant (including captive or co-generating stations or both) shall be primarily responsible to ensure 100 per cent utilisation of ash (fly ash, and bottom ash) generated by it in an eco-friendly manner as given in sub-paragraph (2);
- (2) The ash generated from coal or lignite based thermal power plants shall be utilised only for the following eco-friendly purposes, namely:-
 - (i) Fly ash based products viz. bricks, blocks, tiles, fibre cement sheets, pipes, boards, panels;
 - (ii) Cement manufacturing, ready mix concrete;
 - (iii) Construction of road and fly over embankment, Ash and Geo-polymer based construction material;
 - (iv) Construction of dam;
 - (v) Filling up of low lying area;
 - (vi) Filling of mine voids;
 - (vii) Manufacturing of sintered or cold bonded ash aggregate;
 - (viii) Agriculture in a controlled manner based on soil testing;
 - (ix) Construction of shoreline protection structures in coastal districts;

- (x) Export of ash to other countries;
- (xi) Any other eco-friendly purpose as notified from time to time.
- (3) A committee shall be constituted under the chairmanship of Chairman, Central Pollution Control Board (CPCB) and having representatives from Ministry of Environment, Forest and Climate Change (MoEFCC), Ministry of Power, Ministry of Mines, Ministry of Coal, Ministry of Road Transport and Highways, Department of Agricultural Research and Education, Institute of Road Congress, National Council for Cement and Building Materials, to examine and review and recommend the eco-friendly ways of utilisation of ash and make inclusion or exclusion or modification in the list of such ways as mentioned in Sub-paragraph (2) based on technological developments and requests received from stakeholders. The committee may invite State Pollution Control Board or Pollution Control Committee, operators of thermal power plants and mines, cement plants and other stakeholders as and when required for this purpose. Based on the recommendations of the Committee, Ministry of Environment, Forest and Climate Change (MoEFCC) may publish such eco-friendly purpose.
- (4) Every coal or lignite based thermal power plant shall be responsible to utilise 100 per cent ash (fly ash and bottom ash) generated during that year, however, in no case shall utilisation fall below 80 per cent in any year, and the thermal power plant shall achieve average ash utilisation of 100 per cent in a three years cycle:

Provided that the three years cycle applicable for the first time is extendable by one year for the thermal power plants where ash utilisation is in the range of 60-80 per cent, and two years where ash utilisation is below 60 per cent and for the purpose of calculation of percentage of ash utilisation, the percentage quantity of utilisation in the year 2021-2022 shall be taken into account as per the table below:

Utilisation percentages of thermal power plants	First compliance Cycle to meet 100 per cent utilisation	Second compliance cycle onwards, to meet 100 per cent utilisation
>80 per cent	3 years	3 years
60-80 per cent	4 years	3 years
<60 per cent	5 years	3 years

Provided further that the minimum utilisation percentage of 80 per cent shall not be applicable to the first year and first two years of the first compliance cycle for the thermal power plants under the utilisation category of 60-80 per cent and <60 per cent, respectively.

Provided also that 20 per cent of ash generated in the final year of compliance cycle may be carried forward to the next cycle which shall be utilised in the next three years cycle along with the ash generated during that cycle.

- (5) The unutilised accumulated ash i.e. legacy ash, which is stored before the publication of this notification, shall be utilised progressively by the thermal power plants in such a manner that the utilization of legacy ash shall be completed fully within ten years from the date of publication of this notification and this will be over and above the utilisation targets prescribed for ash generation through current operations of that particular year:

Provided that the minimum quantity of legacy ash in percentages as mentioned below shall be utilised during the corresponding year and the minimum quantity of legacy ash is to be calculated based on the annual ash generation as per installed capacity of thermal power plant.

Year from date of publication	1 st	2 nd	3 rd -10 th
Utilisation of legacy ash (in percentage of Annual ash)	At least 20 per cent	At least 35 per cent	At least 50 per cent

Provided further that the legacy ash utilisation shall not be required where ash pond or dyke has stabilised and the reclamation has taken place with greenbelt or plantation and the concerned State Pollution Control Board shall certify in this regard. Stabilisation and reclamation of an ash pond or dyke including certification by the Central Pollution Control Board (CPCB) or State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall be carried out within a year from the date of publication of this notification. The ash remaining in all other ash ponds or dykes shall be utilised in progressive manner as per the above mentioned timelines.

Note: The obligations under sub-paragraph (4) and (5) above for achieving the ash utilisation targets shall be applicable from 1st April, 2022.

- (6) Any new as well as operational thermal power plant may be permitted an emergency or temporary ash pond with an area of 0.1 hectare per Mega Watt (MW). Technical specifications of ash ponds or dykes shall be as per the guidelines of Central Pollution Control Board (CPCB) made in consultation with Central Electricity Authority (CEA) and these guidelines shall also lay down a procedure for annual certification of the ash pond or dyke on its safety, environmental pollution, available volume, mode of disposal, water consumption or conservation in disposal, ash water recycling and greenbelt, etc., and shall be put in place within three months from the date of publication of this notification.
- (7) Every coal or lignite based thermal power plant shall ensure that loading, unloading, transport, storage and disposal of ash is done in an environmentally sound manner and that all precautions to prevent air and water pollution are taken and status in this regard shall be reported to the concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) in Annexure attached to this notification.
- (8) Every coal or lignite based thermal power plant shall install dedicated silos for storage of dry fly ash silos for at least sixteen hours of ash based on installed capacity and it shall be reported upon to the concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) in the Annexure and shall be inspected by Central Pollution Control Board (CPCB) or State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) from time to time.
- (9) Every coal or lignite based thermal power plant (including captive or co-generating stations or both) shall provide real time data on daily basis of availability of ash with Thermal Power Plant (TPP), by providing link to Central Pollution Control Board's web portal or mobile phone App for the benefit of actual user(s).
- (10) Statutory obligation of 100 per cent utilisation of ash shall be treated as a change in law, wherever applicable.

B. For the purpose of utilisation of ash, the subsequent sub-para's shall apply.—

- (1) All agencies (Government, Semi-government and Private) engaged in construction activities such as road laying, road and flyover embankments, shoreline protection structures in coastal districts and dams within 300 kms from the lignite or coal based thermal power plants shall mandatorily utilise ash in these activities:

Provided that it is delivered at the project site free of cost and transportation cost is borne by such coal or lignite based thermal power plants.

Provided further that thermal power plant may charge for ash cost and transportation as per mutually agreed terms, in case thermal power plant is able to dispose the ash through other means and those agencies makes a request for it and the provisions of ash free of cost and free transportation shall be applicable, if thermal power plant serves a notice on the construction agency for the same.

- (2) The utilisation of ash in the said activities shall be carried out in accordance with specifications and guidelines laid down by the Bureau of Indian Standards, Indian Road Congress, Central Building Research Institute, Roorkee, Central Road Research Institute, Delhi, Central Public Works Department, State Public Works Departments and other Central and State Government Agencies.

- (3) It shall be obligatory on all mines located within 300 kilometres radius of thermal power plant, to undertake backfilling of ash in mine voids or mixing of ash with external Overburden dumps, under Extended Producer Responsibility (EPR). All mine owners or operators (Government, Public and Private Sector) within three hundred kilometres (by road) from coal or lignite based thermal power plants, shall undertake measures to mix at least 25 per cent of ash on weight to weight basis of the materials used for external dump of overburden, backfilling or stowing of mine (running or abandoned as the case may be) as per the guidelines of the Director General of Mines Safety (DGMS):

Provided that such thermal power stations shall facilitate the availability of required quantity of ash by delivering ash free of cost and bearing the cost of transportation or cost of transportation arrangement decided on mutually agreed terms and mixing of ash with overburden in mine voids and dumps shall be applicable for the overburden generated from the date of publication of this notification and the utilisation of ash in the said activities shall be carried out in accordance with guidelines laid down by the Central Pollution Control Board, Director General of Mines Safety and Indian Bureau of Mines.

Explanation.- For the purpose of this sub-paragraph, it is also clarified that the provisions of ash free of cost and free transportation shall be applicable, if thermal power plants serve a notice on the mine owner for the same and the mandate of using 25 per cent of ash for mixing with overburden dump and filling up of mine voids shall not be applicable unless a notice is served on the mine owner by thermal power plant.

- (4) (i) All mine owners shall get mine closure plans (progressive and final) to accommodate ash in the mine voids and the concerned authority shall approve mine plans for disposal of ash in mine voids and mixing of ash with overburden dumps. The Ministry of Environment, Forest and Climate Change (MoEFCC) has issued guidelines on 28th August, 2019 regarding exemption of requirement of Environmental Clearance of thermal power plants and coal mines along with the guidelines to be followed for such disposal.

(ii) The Ministry in consultation with Central Pollution Control Board (CPCB), Director General of Mine Safety (DGMS) and Indian Bureau of Mines (IBM) may issue further guidelines time to time to facilitate ash disposal in mine voids and mixing with overburden dumps and it shall be the responsibility of mine owners to get the necessary amendments or modifications in the permissions issued by various regulatory authorities within one year from the date of identification of such mines.

- (5) (i) There shall be a committee headed by Chairperson, Central Pollution Control Board (CPCB) with representatives from Ministry of Environment, Forest and Climate Change, Ministry of Power, Ministry of Mines, Ministry of Coal, Director General of Mine Safety and Indian Bureau of Mines for identification of mines for backfilling of mine voids with ash or mixing of ash with overburden dump including examination of safety, feasibility (not economic feasibility) and aspects of environmental contamination and the committee shall get updated quarterly reports prepared regarding identified mines (both underground and opencast) for the stakeholder Ministries or Departments and the committee shall start identifying the suitable mines immediately after the publication of this notification.

(ii) Thermal power plants or mines shall not wait for disposal of ash till the identification is done by the above mentioned committee, to meet the utilisation targets mandated as above.

- (6) Filling of low lying areas with ash shall be carried out with prior permission of the State Pollution Control Board or Pollution Control Committee for approved projects, and in accordance with guidelines laid down by Central Pollution Control Board (CPCB) and the State Pollution Control Board or Pollution Control Committee (PCC) shall publish approved sites, location, area and permitted quantity annually on its website.

- (7) Central Pollution Control Board after engaging relevant stakeholders, shall put in place the guidelines within one year for all types of activities envisaged under this notification including putting in place time bound online application process for the grant permission by State Pollution Control Boards (SPCBs) or Pollution Control Committees (PCCs).

- (8) ✓ All building construction projects (Central, State and Local authorities, Govt. undertakings, other Govt. agencies and all private agencies) located within a radius of three hundred kilometres from a coal or lignite based thermal power plant shall use ash bricks, tiles, sintered ash aggregate or other ash based products, provided these are made available at prices not higher than the price of alternative products.
- (9) Manufacturing of ash based products and use of ash in such products shall be in accordance with specifications and guidelines laid down by the Bureau of Indian Standards, Indian Road Congress, and Central Pollution Control Board.

C. Environmental compensation for non-compliance.—

- (1) In the first two years of a three years cycle, if the coal or lignite based thermal power plant (including captive or co-generating stations or both) has not achieved at least 80 per cent ash (fly ash and bottom ash) utilisation, then such non-compliant thermal power plants shall be imposed with an environmental compensation of Rs. 1000 per ton on unutilised ash during the end of financial year based on the annual reports submitted and if it is unable to utilise 100 per cent of ash in the third year of the three years cycle, it shall be liable to pay an environmental compensation of Rs. 1000 per ton on the unutilised quantity on which environmental compensation has not been imposed earlier:

Provided that the environmental compensation shall be estimated and imposed at the end of last year of the first compliance cycle as per the various utilisation categories as mentioned in sub-paragraph (4) of Para A.

- (2) Environmental compensation collected by the authorities shall be deposited in the designated account of Central Pollution Control Board.
- (3) In case of legacy ash, if the coal or lignite based thermal power plant (including captive or co-generating stations or both) has not achieved utilisation equivalent to at least 20 per cent (for the first year), 35 per cent (for the second year), 50 per cent (for third to tenth year) of ash generated based on installed capacity, an environmental compensation of Rs. 1000 per ton of unutilised legacy ash during that financial year shall be imposed and if the utilization of legacy ash is not completed at the end of 10 years, an environmental compensation of Rs. 1000 per ton shall be imposed on the remaining unutilised quantity which has not been imposed earlier.
- (4) It shall be the responsibility of the transporters or vehicle owner to deliver ash to authorised purchaser or user agency and if it is not complied, then an environmental compensation of Rs. 1500 per ton on such quantity as mis-delivered to unauthorised users or non- delivered to authorised users will be imposed besides prosecution of such non-compliant transporters by State Pollution Control Board (SPCB) or Pollution Control Committee (PCC).
- (5) It is the responsibility of the purchasers or user agencies to utilise ash in an eco-friendly manner as laid down at para B of this notification and if it is not complied, then an environmental compensation of Rs. 1500 or per ton shall be imposed by State Pollution Control Board (SPCB) or Pollution Control Committee (PCC).
- (6) If the user agencies do not utilise ash to the extent obligated under para B or the extent to which they have been intimated through Notice(s) served under sub-paragraph (1) of para D, whichever is lower, they shall be liable to pay Rs. 1500 per ton of ash for the quantity they fall short off:

Provided that the environmental compensation on building constructions shall be levied at Rs.75/- per square feet of built up area of construction.

- (7) (i) The environmental compensation collected by Central Pollution Control Board from the thermal power plants and other defaulters shall be used towards the safe disposal of the unutilised ash and the fund may also be utilised for advancing research on use of ash including ash based products.

(ii) The liability of ash utilisation shall be with thermal power plants even after imposition of environmental compensation on unutilised quantities and in case thermal power plant achieves the ash utilisation of any

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particular cycle after imposition of environmental compensation in subsequent cycles, the said amount shall be returned to thermal power plant after deducting 10 per cent of the environmental compensation collected on the unutilised quantity during the next cycle and deduction of 20 per cent, 30 per cent, and so on, of the environmental compensation collected is to be made in case of utilisation of ash in subsequent cycles.

D. Procedure for supply of ash or ash based products.—

- (1) The owner of thermal power plants or manufacturers of ash bricks or tiles or sintered ash aggregate shall serve written notice to persons or agencies who are liable to utilise ash or ash based products, offering for sale, or transport or both.
- (2) Persons or user agencies who have been served notices by owner of thermal power plants or manufacturers of ash bricks or tiles or sintered ash aggregate, if they have already tied up with other agencies for the purpose of utilisation of ash or ash products, shall inform the thermal power plant accordingly, if they cannot use any ash or ash products or use reduced quantity.

E. Enforcement, Monitoring, Audit and Reporting.—

- (1) The Central Pollution Control Board (CPCB) and the concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall be the enforcing and monitoring authority for ensuring compliance of the provisions and shall monitor the utilisation of ash on quarterly basis. Central Pollution Control Board shall develop a portal for the purpose within six months of date of publication of the notification. The concerned District Magistrate shall have concurrent jurisdiction for enforcement and monitoring of the provisions of this notification.
- (2) (i) Thermal power plants shall upload monthly information regarding ash generation and utilisation by 5th of the next month on the web portal. Annual implementation report (for the period 1st April to 31st March) providing information about the compliance of provisions in this notification shall be submitted by the 30th day of April, every year to the Central Pollution Control Board, concerned State Pollution Control Board or Pollution Control Committee (PCC), Central Electricity Authority (CEA), and concerned Integrated Regional Office of Ministry of Environment, Forest and Climate Change by the coal or lignite based thermal power plants. Central Pollution Control Board and Central Electricity Authority shall compile the annual reports submitted by all the thermal power plants and submit to Ministry of Environment, Forest and Climate Change by 31st May.
- (ii) All other user agencies shall submit consumption or utilisation or disposal of ash and use of ash based products as mandated in this notification in the compliance report of Environmental Clearance (EC) issued by Ministry of Environment, Forest and Climate Change or State Level Environment Impact Assessment Authority (SEIAA) or Consent to Operate (CTO) issued by State Pollution Control Board (SPCB) or Pollution Control Committee (PCC), whichever is applicable. The Central Pollution Control Board (CPCB) or State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall publish annual report of ash utilisation of all other agencies except thermal power plants to review the effective implementation of the provisions of the notification.
- (3) For the purpose of monitoring the implementation of the provisions of this notification, a committee shall be constituted under the Chairperson, Central Pollution Control Board (CPCB), with members from Ministry of Power, Ministry of Coal, Ministry of Mines, Ministry of Environment, Forest and Climate Change, Ministry Road Transportation and Highways, Department of Heavy Industry as well as any concerned stakeholder(s), to be nominated by the Chairman of the committee. The committee may make recommendations for effective and efficient implementation of the provisions of the notification. The committee shall meet at least once in six months and review annual implementation reports and the committee shall also hold stakeholder consultations for monitoring of ash utilisation as mandated by this notification by inviting relevant stakeholder(s) at least once in six months. The committee shall submit the six monthly report to Ministry of Environment, Forest and Climate Change (MoEFCC).

- (4) For the purpose of resolving disputes between thermal power plants and users of ash or manufacturer of ash based products, the State Governments or Union territory administration constitute a Committee within three months from the date of publication of this notification under the Chairman, State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) with representatives from Department of Power, and one representative from the Department which deals with the subject of concerned agency with which dispute is made.
- (5) The compliance audit for ash disposal by the thermal power plants and the user agency shall be conducted by auditors, authorised by Central Pollution Control Board (CPCB) and audit report shall be submitted to Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) by 30th November every year. Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall initiate action against non-compliant thermal power plants within fifteen days of receipt of audit report.

[F. No. HSM-9/1/2019-HSM]

NARESH PAL GANGWAR, Jt. Secy.

Annexure

Ash Compliance Report (for the period 1st April-31st March) to be submitted on or before 31st May.

Sl. No.	Details	
1.	Name of Power Plant	
2.	Name of the company	
3.	District	
4.	State	
5.	Postal address for communication:	
6.	E-mail:	
7.	Power Plant installed capacity (MW):	
8.	Plant Load Factor (PLF):	
9.	No. of units generated (MWh):	
10.	Total area under power plant (ha): (including area under ash ponds)	
11.	Quantity of coal consumption during reporting period (Metric Tons per Annum):	
12.	Average ash content in percentage (per cent):	
13.	Quantity of current ash generation during reporting period (Metric Tons per Annum): Fly ash (Metric Tons per Annum): Bottom ash (Metric Tons per Annum):	
14.	Capacity of dry fly ash storage silo(s) (Metric Tons) :	
15.	Details of utilisation of current ash generated during reporting period (a) Total quantity of current ash utilised (MTPA) during reporting period: (b) Quantity of fly ash utilised (MTPA): (i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels) (ii) Cement manufacturing:	

	(iii) Ready mix concrete: (iv) Ash and Geo-polymer based construction material: (v) Manufacturing of sintered or cold bonded ash aggregate: (vi) Construction of roads, road and fly over embankment: (vii) Construction of dams: (viii) Filling up of low lying area: (ix) Filling of mine voids: (x) Use in overburden dumps: (xi) Agriculture: (xii) Construction of shoreline protection structures in coastal districts; (xiii) Export of ash to other countries: (xiv) Others (please specify): (c) Quantity of bottom ash utilised (MTPA): (i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels): (ii) Cement manufacturing: (iii) Ready mix concrete: (iv) Ash and Geo-polymer based construction material: (v) Manufacturing of sintered or cold bonded ash aggregate: (vi) Construction of roads, road and flyover embankment: (vii) Construction of dams: (viii) Filling up of low lying area: (ix) Filling of mine voids: (x) Use in overburden dumps: (xi) Agriculture: (xii) Construction of shoreline protection structures in coastal districts: (xiii) Export of ash to other countries: (xiv) Others (please specify): Total quantity of current ash unutilised (MTPA) during reporting period:	
16.	Percentage utilisation of current ash generated during reporting period (per cent):	
17.	Details of disposal of ash in ash ponds (a) Total quantity of ash disposed in ash pond(s) (Metric Tons) as on 31st March (excluding reporting period): (b) Quantity of ash disposed in ash pond(s) during reporting period (Metric Tons): (c) Total quantity of water consumption for slurry discharge into ash ponds during reporting period (m³): (d) Total number of ash ponds: (i) Active: (ii) Exhausted (yet to be reclaimed): (iii) Reclaimed: (e) total area under ash ponds (ha):	
18.	Individual ash pond details <i>Ash pond-1,2, etc (please provide below mentioned details separately, if number of ash ponds is more than one)</i> (a) Status: Under construction or Active or Exhausted or	

	Reclaimed (b) Date of start of ash disposal in ash pond (DD/MM/YYYY or MMYYYY): (c) Date of stoppage of ash disposal in ash pond after completing its capacity (DD/MM/YYYY or MM/YYYY): (Not applicable for active ash ponds) (c) area (hectares): (d) dyke height (m): (d) volume (m ³): (e) quantity of ash disposed as on 31 st March (Metric Tons): (f) available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons): (g) expected life of ash pond (number of years and months): (e) co-ordinates (Lat and Long): (please specify minimum 4 co-ordinates) (f) type of lining carried in ash pond: HDPE lining or LDPE lining or clay lining or No lining g) mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD) (h) Ratio of ash: water in slurry mix (1:___): (i) Ash water recycling system (AWRS) installed and functioning: Yes or No (j) Quantity of wastewater from ash pond discharged into land or water body (m3): (k) Last date when the dyke stability study was conducted and name of the organisation who conducted the study: (l) Last date when the audit was conducted and name of the organisation who conducted the audit:									
19.	Quantity of legacy ash utilised (MTPA): i. Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels): ii. Cement manufacturing: iii. Ready mix concrete: iv. Ash and Geo-polymer based construction material: v. Manufacturing of sintered or cold bonded ash aggregate: vi. Construction of roads, road and flyover embankment: vii. Construction of dams: viii. Filling up of low lying area: ix. Filling of mine voids: x. Use in overburden dumps: xi. Agriculture: xii. Construction of shoreline protection structures in coastal districts; xiii. Export of ash to other countries: xiv. Others (please specify):									
20.	Summary: <table border="1"> <thead> <tr> <th>Details</th><th>Quantity generated (MTP)</th><th>Quantity utilised (MTP) and (per cent)</th><th>Balance quantity (MTP)</th></tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td></tr> </tbody> </table>	Details	Quantity generated (MTP)	Quantity utilised (MTP) and (per cent)	Balance quantity (MTP)					
Details	Quantity generated (MTP)	Quantity utilised (MTP) and (per cent)	Balance quantity (MTP)							

	Current ash during reporting period			
	Legacy ash			
	Total			
21.	Any other information: Soft copy of the annual compliance report, and shape files of power plant and ash ponds may be e-mailed to:- moefcc-coalash@gov.in			
22.	Signature of Authorised Signatory			

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 327 of 2022

Amaravati Fly Ash Bricks Manufacturers Association Applicants

Versus

Union of India & Ors

.....Respondents

REPLY AFFIDAVIT ON BEHALF OF RESPONDENT NO. 4
(MINISTRY OF POWER, UNION OF INDIA)

I, Tarun Agarwal, do hereby solemnly affirm and sincerely state as follows:

1. I am working as Assistant Director in Central Electricity Authority, Ministry of Power, Sewa Bhawan, R.K. Puram, New Delhi—110066 and I am fully conversant with the facts based on the records and I am also authorized to file this reply affidavit on behalf of the Respondent No. 4.
2. I have read and understood the Original Application and am filing this Affidavit as reply thereto.
3. It is submitted that the contents of the Original Application that have neither been specifically admitted hereunder nor are a matter of record are denied.
4. That the deponent craves liberty to raise any further submissions or file additional affidavits if need arises during the course of arguments.

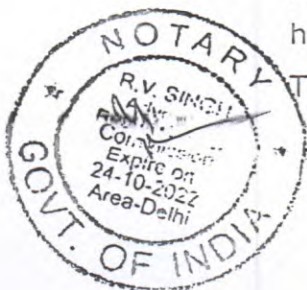


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5. PRELIMINARY SUBMISSION:

It is humbly submitted before the Hon'ble Tribunal:

- i. That the Amaravati Fly Ash Bricks Manufacturers Association ("petitioner association") through this Application has *inter-alia* prayed before the Hon'ble Tribunal to quash the advisory issued vide letter dated 22.02.2022 issued by Respondent No. 4, i.e. Ministry of Power, Government of India.
- ii. That the respondent no. 1 i.e. Ministry of Environment, Forest and Climate Change ("MoEFCC") has issued various notifications on the subject of fly ash utilization. In this series, the first notification was issued on 14th September 1999 which was subsequently amended in the year 2003, 2009 and 2016. The fly ash was being given to the end users as per the provisions of aforesaid notifications issued by the respondent no.1. Now, the respondent no.1 has issued the notification dated 31.12.2021 which has superseded all the previous notifications.
- iii. That the petitioners have their own commercial interests. They want to get ash free of cost from Thermal Power Plants ("TPPs") so that they can make a higher profit as brick manufacturing is a commercial venture. Fly Ash has emerged as a valuable commodity as it is used in many applications like cement manufacturing; and commercial enterprises are willing to pay for it.
- iv. During late 1990s, the aim of the Government needed to promote use of fly ash and therefore incentives were given. That over the period of time from 1999 to 2021, in period of 22 years, the fly ash has now become a valuable commodity and its demand is rising. The year-wise utilization of fly ash during the period 1999 - 2021



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is depicted in a graph annexed and marked hereto as Annexure-R1.

- v. The process of distribution of fly ash for various users needed to be made transparent to avoid malpractices.
- vi. That, after observing fly ash emerging as a valuable commodity, it was felt that giving it free and also bearing the transportation costs was leading to malpractices. Further, the answering respondent was receiving a lot of complaints about preferential treatments in the fly ash distribution, and therefore, in order to maintain transparency and to restrict malpractices, competitive bidding process was suggested as the most suitable method to determine the rate of supply of fly ash and its transportation. This was given as the first option and whatever fly ash is left after bidding process had to be disposed as per the procedure laid out in the notifications of the respondent no. 1.
- vii. That it was also felt necessary to monetize the sale of ash so that the tariff of electricity is as low as possible.
- viii. Where TPPs are able to achieve 100% ash utilization, the objective of the MoEF&CC Notification is met. Further, none of the directives contained in the letter are leading towards deterioration in environment in any way. The advisory has allowed free of cost of supply including bearing of the transportation also, in case the sale/auction process does not yield full utilization. Therefore, to say that the present directive is countering the improvement of environment is not true.
- ix. Brick industries can participate in auction process and get requisite quantity of ash allocated to them as per terms and conditions of the auction. In case 100% ash is not tied up during the auction, Brick industries can obtain allocation of requisite



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quantity on free of cost basis while bearing cost of transportation of ash. Even after this if all the ash is not tied up, TPPs can issue Ash free of cost and bear cost of transportation of ash to eligible projects.

x. In no way, the advisory prohibits the use of ash. Auction is done only to monetize some quantity of ash from Commercial ventures which is used to invest in Ash Utilization enhancement activities / infrastructure which ultimately reduces burden on electricity consumers.

xi. The generation of fly ash is a continuous process and therefore ash is stored in Silos and when these silos get full, the ash in slurry form is sent to Ash Ponds and thus ash ponds are essential part for smooth 24x7 operation of the TPPs.

xii. For safe disposal of this slurry into ponds, well-engineered bunds are created utilizing huge quantity of ash, which eliminates use of topsoil for this bund creation and thus protecting environment, and hence, qualifying for being termed as utilization.

xiii. That the said advisory issued vide letter dated 22.02.2022 by answering respondent itself mentions about the objective of the Government for its issuance as also mentioned herein below:

a. That the respondent no. 1 issued its notification dated 31.12.2021 with regard to utilisation of ash from coal or lignite based thermal power plant, and therefore, in order to enforce the provisions of the said notification, the answering respondent issued its said advisory.



That as per the relevant clause B (1) of the said Notification dated 31.12.2021, the thermal power plants may charge for ash

Tarun
Secretary
Ministry of Power
Govt. of India
New Delhi

and its transportation, in case the thermal power plant (TPP) is able to dispose the ash through other means. The provisions of ash free of cost and free transportation is to be applicable; only if the thermal power plant serves a notice on the construction agencies/ mine owner for the same.

- c. That it is pertinent to note that the objective of the Government is to provide affordable power to consumers. Any extra costs without making efforts to monetize disposal of ash by TPPs lead to increase in electricity tariff, which is to be borne by the consumers.
- d. That ash has emerged as a valuable commodity and so giving it free, and also meeting the transportation costs will lead to malpractices. Therefore, providing such a valuable commodity through bidding process would in turn help in providing cheaper power to the consumers. In order to maintain transparency and to restrict malpractices, competitive bidding process is the most suitable method to determine the rate of supply of goods and services. Therefore, it is necessary to streamline the procedure to dispose off the ash by TPPs in a transparent manner and also to monetize the sale of ash so as to reduce the tariff burden on the consumers.
- xiv. That the said advisory of the answering respondent is in line with the notification dated 31.12.2021 of the respondent no. 1 and to provide for the guidelines for providing ash to the prospective user agencies by the coal/ lignite based TPPs.
- xv. That the quantum jump of the fly ash Utilization by the TPPs is expected after issuance of the said notification dated 31.12.2021 of respondent no. 1 and the advisory issued vide letter dated 22.02.2022 of answering respondent.



For

Secretary, Ministry of Power,
Govt. of India,
New Delhi.

xvi. That the process of disposal of fly ash by the TPP has now streamlined and there is reduction in the complaints of malpractices in the disposal of fly ash by Thermal Power Plants.

6. Para-Wise Comments to the Petition

6.1 Paras 01 to 6 (xvi): That the contents of Paras 01 to 6 (xvi) are either submissions or fact of the matter made before the Hon'ble Tribunal which are not pertaining to the answering respondent and thus need no reply.

6.2 Paras 6 (xvii) to Para 6 (xviii): That the contents of Para 6 (xvii) to Para 6 (xviii) are denied on the grounds that the advisory dated 22.02.2022 issued by the answering respondent is in line with the Notification dated 31 December, 2021 issued by the respondent no. 1, which provides at para 3 of B (1) that Thermal Power Plants (TPPs) may dispose the fly ash by any other means, before free distribution to users. It is humbly submitted that over the period of time from 1999 to 2021, in period of 22 years, fly ash has now become a valuable commodity and its demand is rising. The process of distribution of fly ash for various users need to be made transparent to avoid malpractices. A similar approach has been cited for transparency in transportation of the fly ash in the advisory issued vide letter dated 22.02.2022 of answering respondent.



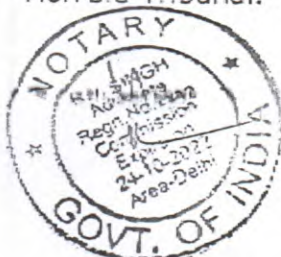
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6.3 **Paras 6 (xix) to Para 6(xxvi)**: That the contents of Paras 6 (xix) to Para 6 (xxvi) are denied on the grounds that advisory issued vide letter dated 22.02.2022 of answering respondent echoes the 100% utilization of the fly ash by thermal power plants by all means. It is expected that a quantum jump in fly ash utilization will follow due to the said advisory of the answering respondent and notification dated 31.12.2021 issued by the respondent No.4. The year-wise utilization of fly ash during the period 1999 – 2021 is depicted in a graph annexed and marked hereto as **Annexure-R1**. The averments of the petitioner about the encashment of Fly ash is strongly denied on the grounds that the monetization of ash will result in reduction in tariff to the consumers of the electricity. It is also humbly submitted before the Hon'ble Tribunal that as per the Notification of the respondent no.4, the fly ash in the Dykes and Ash Ponds is also to be utilized in the next ten years.

6.4 **Paras 6 (xxvii) to 6 (xxxii)**: That the contents of Paras 6 (xxvii) to 6 (xxxii) are submissions made before the Hon'ble Tribunal which are not pertaining to the answering respondent and thus need no reply.

6.5 **Para 6 (xxxiii)**: That the contents of Para 6 (xxxiii) are denied on the ground that the Notification dated 31.12.2021 would fall under the provision of "Change in Law" for the purpose of tariff determination by the Electricity Regulatory Commissions. Therefore, The TPPs may approach respective Electricity Regulatory Commissions to adjust the revenue generated from the sale of fly for determination of generation Tariff. It is humbly submitted that the impact of this may be visible from the year 2023 onwards.

6.6 **Paras 6 (xxxiv) to 6 (xliii)**: That the contents of Paras 6 (xxxiv) to 6 (xliii) are reiterations of submissions made earlier before the Hon'ble Tribunal. It is humbly submitted before the Hon'ble Tribunal



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that all TPPs are mandated for 100% utilisation of the fly ash generated in the plants. TPPs are also mandated to utilize 100% the ash deposited in the dykes or Ponds in next 10 years. Further to that the fly ash definition has been expanded to include fly ash which is separated in electrostatic precipitator and the bottom ash which is a bit over burnt residue. This has been done as per market demand as the demand for fly ash is increasing as submitted above.

6.7 Para 6 (xliv): That the contents of Paras 6 (xliv) are submission before the Hon'ble Tribunal are denied on the grounds that while before taking the final decision for issuance of the said advisory of the answering respondent, all the possible options for the utilization of the fly ash have been considered.

6.8 Para 7: That the contents of Para 7 are denied on the grounds already submitted above. However, it is again submitted that in order to maintain transparency and to restrict malpractices, competitive bidding process is the most suitable method to determine the rate of supply of goods and services. Therefore, it is necessary to streamline the procedure to dispose of the ash by TPPs in a transparent manner and also to monetize the sale of ash so as to reduce the tariff burden on the consumers.

6.9 Para 8: That the contents of Para 8 are denied on the grounds that the advisory dated 22.02.2022 issued by the answering respondent is in line with the Notification dated 31 December, 2021, which provides at para 3 of B (1) that TPPs may dispose the fly ash by any other means, before free distribution to users. Moreover, the detailed submissions in this regard, have already been made above.



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6.10 **Paras 9 to 12:** That the contents of Paras 9 to 12 are submissions made before the Hon'ble Tribunal which are not pertaining to the answering respondent and thus need no reply.

6.11: Reply of Grounds:

Para A : That the contents of Para A are denied on the grounds that the advisory dated 22.02.2022 of the answering respondent is in line with the Notification dated 31 December, 2021, which provides at para 3 of B (1) that Thermal Power Plants (TPPs) may dispose the fly ash by any other means, before free distribution to users.

Para B : That the contents of Para B are denied on the grounds that the answering respondent has suitably taken view on the Review Committee constituted by NITI AAYOG.

Para C : That the contents of Para C are denied on the grounds that Hon'ble Tribunal in its Order dated 18.01.2022 in OA no. 164 of 2018 had not indicated to consult answering respondent to the Fly Ash utilization and Management Mission.

Paras D to F: That the contents of Paras D to F are the submissions before the Hon'ble Tribunal which are not pertaining to the answering respondent and thus need no reply.



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Para G: That the contents of Para G are denied on the ground that the averments made by the petitioner are factually incorrect, as respondent number 4 is neither generating nor dumping fly ash.

Para H: That the contents of Para H are the submissions before the Hon'ble Tribunal which are not pertaining to the answering respondent and thus need no reply

Para I: It is only after MoEF&CC Notification dated 31.12.2021 that an advisory has been issued on 22.02.2022 to Thermal Power Plants to provide ash to user agencies as defined in the MoEF&CC Notification. The advisory has allowed free of cost of supply including bearing of the transportation also, in case the sale/auction process does not yield full utilization.

Para J: That the answering respondent has the residual powers to regulate trade of fly ash by the Thermal Power Plants and it is within its bounden duty that the advisory dated 22.2.2022 has been issued.

Paras K to N: That the contents of Paras K to N are the submissions before the Hon'ble Tribunal which are not pertaining to the answering respondent and thus need no reply.



[Signature]
 Joint Secretary (Power)
 Ministry of Power
 Government of India
 New Delhi

6.12 Reply to Prayers:

Prayer A: It is humbly submitted before the Hon'ble Tribunal that the said advisory of the answering respondent is in line with notification dated 31.12.2021 of the respondent no. 1 and to provide for the guidelines for providing ash to the prospective user agencies by the coal/lignite based TPPs.

Prayer B: It is humbly submitted before the Hon'ble Tribunal that the contents of prayer B are not pertaining to the answering respondent and thus need no reply.

Prayers C and D: National Thermal Power Corporation (NTPC) Limited has informed that generation of Ash is a 24x7 process whereas its Utilization is not. At Pit Head Plants, avenues for utilization of Silo Ash are very limited. Power plants are therefore constrained to dump Ash in Ash Ponds and utilize it later based on requirement viz. Road Projects etc. Further, NTPC-Rihand established a Fly Ash depot at Varanasi in June 2019. However, due to no response, it had to be shut down. NTPC-Vindhyachal established a Fly Ash depot at Rewa in November 2019. However, the response is not at all encouraging and this too is also on the verge of shutdown.



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It is humbly submitted before the Hon'ble Tribunal that the said advisory of the answering respondent is in line with notification dated 31.12.2021 of the respondent no. 1 and to provide for the guidelines for providing ash to the prospective user agencies by the coal/ lignite based TPPs.

7. Prayer of the Answering Respondent:

It is humbly submitted before the Hon'ble Tribunal that in view of the submissions made above, the Hon'ble Tribunal may not allow the petition and render justice in the public interest.

Taru
DEPONENT

I Identify the respondent/executor who has signed in my presence

VERIFICATION

I, the above named deponent do hereby state that the facts stated above are true and correct to the best of my knowledge and belief and nothing material has been concealed therefrom.

Verified at New Delhi on this 1st day of August, 2022.



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DEPONENT

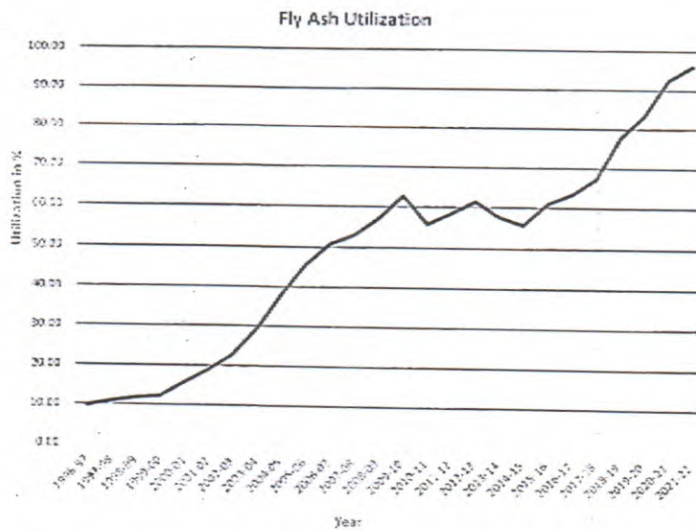
Solemnly affirmed before me, read over & explained to the deponent.

Notary Public, DELHI

- 1 AUG 2022

Annexure 1

Year	Total Fly Ash Generated/Utilized in %
1996-97	9.63
1997-98	10.80
1998-99	11.70
1999-00	12.03
2000-01	15.70
2001-02	18.00
2002-03	22.68
2003-04	25.39
2004-05	30.04
2005-06	45.69
2006-07	50.86
2007-08	51.00
2008-09	57.11
2009-10	62.60
2010-11	55.79
2011-12	55.48
2012-13	61.37
2013-14	57.63
2014-15	55.69
2015-16	60.97
2016-17	63.28
2017-18	67.13
2018-19	77.59
2019-20	83.28
2020-21	92.41
2021-22	95.95



Based on the Data compiled from various Thermal Power Plants on yearly Basis in CEA, MoP

Farm

F.No. 11/3/2018-HSM
Government of India
Ministry of Environment, Forest and Climate Change
Hazardous Substances Management Division

6th Floor, Jal Wing,
Indira Paryavaran Bhawan,
Jorbagh Road,
New Delhi-110 003

Dated: 9 March, 2022

OFFICE ORDER

Sub: Constitution of Fly Ash Management and Utilization Mission for scientific management and utilization of fly ash-reg.

The Government of India, Ministry of Environment, Forest and Climate Change had notified the fly ash notification, 1999, which was subsequently amended in 2003, 2009 and 2016. The notification vide S.O. 5481(E) dated 31.12.2021 has superseded the 1999 notification and the subsequent amendments thereof.

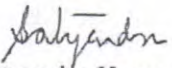
2. In pursuance of the Order dated 18.01.2022 of Hon'ble National Green Tribunal (Principal Bench) in Original Application No. 164 of 2018 in the matter of Ashwani Kumar Dubey v. Union of India & Ors. (tagged along with other connected matters), the Ministry of Environment, Forest and Climate Change may hereby constitute the Mission on Fly Ash Management and Utilisation—

- i) Secretary, Ministry of Coal
- ii) Secretary, MoEF&CC
- iii) Secretary, Ministry of Power
- iv) Chief Secretary, State of U.P.
- v) Chief Secretary, State of M.P.
- vi) Chairman, CPCB
- vii) ACSs/PSs, Power, UP and MP
- viii) ACSs/PSs Industries, UP and MP
- ix) Additional Secretary, HSMD
- x) CMDs of all power projects, coal mines other industries in Singrauli and Sonebhadra industrial regions.
- xi) Any other person(s) as nominated

3. The Terms of Reference of the Mission would be as under-

- i. To coordinate and monitor issues relating to handling and disposal of fly ash as well as all associated issues in light of the Joint Committee's recommendations for all the Thermal Power Plants and other industries in Singrauli and Sonebhadra industrial regions.

- ii. To prepare an action plan as per the recommendations of the Joint Committee (as per Para 15 of the NGT Order dated 18.01.2022).
 - iii. To prepare resolutions and quarterly progress reports for information of stakeholders and inhabitants in the Singrauli and Sonebhadra industrial areas.
 - iv. The Mission will be free to interact with the concerned Government Departments/ Expert institutions/ individuals/other stakeholders.
 - v. The Mission may in its first meeting require voluntary financial contribution by all the projects in the proportion of the financial capacity of the projects out of CSR funds or otherwise.
 - vi. The contribution, along with compensation which may be collected may be credited to a separate environment restoration account for restoration of environment and relief to the victims of damage to the environment in such manner as may be found necessary by the Mission.
 - vii. Any victim or aggrieved party will be free to approach the Mission for providing such relief.
 - viii. The Mission may also consider the safeguards laid down in the Notification dated 31.12.2021, particularly for safety audits of the ash dykes which should be conducted particularly for structural stability, as far as possible within six months.
 - ix. The Mission may consider on site and off site crisis management plan with respect to fly ash ponds and dykes.
 - x. The Mission may evolve mechanism for interaction with stakeholders, including associations of brick kiln owners.
 - xi. Public health and risk impact assessment in the areas of operation of TPPs and generators of fly ash may be got conducted.
 - xii. Guidelines be also issued for siting, design and engineering standards for the location, disposal, maintenance and regulation of Ash Ponds as breach of a fly ash ponds result in great disaster.
 - xiii. The Mission may monitor scientific management and utilization of fly ash by power projects outside Singrauli and Sonebhadra, in coordination with Chief Secretaries of concerned States and adopting safety measures for ash dykes, installing devices to control air pollution, (including FGDs, OCEMS) in a time bound manner and restoration of environment and public health.
 - xiv. The Mission may consider use of beneficiated coal.
 - xv. The Mission may draw a roadmap for utilization and disposal of entire legacy fly ash for Singrauli and Sonebhadra industrial areas as well as for all the Power Plants located in clusters or standalone with tagging the sources to utilize fly ash on voluntary and compulsion mode for which required mechanism is to be laid down.
 - xvi. The Mission may take up any other matter towards meeting the overall objectives.
3. The Mission is to hold its first meeting within one month to take stock of the situation and to prepare action plan. Thereafter, it may meet at least once in a month for one year to review the progress.
4. The resolutions of the Mission and quarterly progress may be placed on the website of MoEF&CC for information of the stakeholders and inhabitants in the area.


Satyendra Kumar
Director

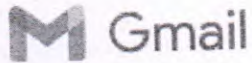
satyendra.kumar07@nic.in

To

All Members (As per the list)

proof of service

41



Dheeraj Singh <dheeraj.adv001@gmail.com>

Reply on behalf of Respondent 4 in case title Amaravati Fly Ash Bricks Manufacturers Association Vs Union of India & Ors

Dheeraj Singh <dheeraj.adv001@gmail.com>
To: advocatenandita@gmail.com

12 November 2022 at 11:50

Dear sir,

I am annexing Reply on behalf of Respondent 4 in case title Amaravati Fly Ash Bricks Manufacturers Association Vs Union of India & Ors

Thanks & Regards
Dheeraj Singh, adv
Junior of Gigi.C.George, adv
Chamber no.457, Lawyers Block -1, Delhi High Court
New Delhi
Mob- 9810625315
Email- gigicgeorge.adv42@yahoo.in



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