IN THE NATIONAL GREEN TRIBUNALPRINCIPAL BRANCH, NEW DELHI

ORIGINAL APPLICATION NO.117 OF 2014

IN THE MATTER OF:

Shantanu Sharma. & Ors. ...Applicant

Versus

MOEF & CC&Ors. .... Respondents

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PLACE: NEW DELHI

DATE:

COUNSEL FOR RESPONDENT NO.1

K.K. SINGH,
ADVOCATE

IN THE NATIONAL GREEN TRIBUNALPRINCIPAL BRANCH, NEW DELHI

ORIGINAL APPLICATION NO.117 OF 2014

IN THE MATTER OF:

Shantanu Sharma. & Ors. ...Applicant

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COMPLIANCE REPORT ON BEHALF OF MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE

MOST RESPECTFULLY PRAYED:

1. That the original applicant herein has filed present application with the prayer that Thermal Power Plants are not utilizing and managing fly ash generated by them as per the various notifications issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC). The applicant has also submitted that non utilization of fly ash as per notification has caused irreparable loss to environment. The applicant has also prayed for implementation of fly ash notification by the concerned stake holders.

2. That while disposing of the present application Hon'ble Tribunal has passed following direction vide Judgement dated 20.11.2018:

"Joint Committee of the representatives of the Ministry of Environment, Forest and Climate Change, Central Pollution Control Board and IIT Roorkee and any other member considered necessary by MoEF&CC needs to be forthwith constituted to finalize action plan covering all aspects so as to not only achieve 100% utilization of fly ash but also to ensure its scientific and environmentally sound disposal. The Committee will also be required to determine the amount of damages to be paid for the violation of requirement of utilization of fly ash. (Para 33)".

"We direct all Thermal Power Stations who have failed to dispose of 100% fly ash up to 31.12.2017, to deposit damages for environment restoration as follows:

Sr. No.	**Capacity of the Thermal Power Plant**	**Cost of damages**
1.	Thermal Power Plants upto the capacity of 500 MW	Rs. 1 Crore

2.	Thermal Power Plants upto the capacity of 1000 MW	Rs. 3 Crores
3.	Thermal Power Plants beyond the capacity of 1000 MW	Rs. 5 Crores

The above amount may be deposited with the CPCB within one month from today, failing which interest @ 12% p.a. will be payable for the delayed period." A copy of the said judgment is annexed herein as **Annexure-A.**

3. It is submitted that Hon'ble Tribunal has directed MoEF&CC vide order dated 27.01.2020;

"A Joint Committee comprising of MoEF&CC, CPCB, IIT Roorkee and any other member considered necessary may submit quarterly progress report on recommendations of Expert Committee of Niti Aayog for enhanced utilization of fly ash in various sectors: mines, roads, cement, industries and bricks etc., along with its implementation status." A copy of the same is annexed herein as **Annexure- B**

4. It is submitted that Ministry of Environment Forest and Climate Change in compliance to the Hon'ble NGT vide order dated 27.01.2020 has published guidelines for disposal/utilisation of Fly Ash for reclamation of Low

Lying Areas and in stowing of abandoned mines/Quarries, in consultation with Central Pollution Control Board and Central Institute of Mining and Fuel Research, Dhandbad. A copy of the same is annexed herein as **Annexure- C**

5. That, MoEF&CC has brought a Policy vide Office Memorandum dated 28thAugust, 2019 A copy is annexed as **Annexure- D** and removed restrictive conditions in the Environmental Clearances of Thermal Power Plants and Coal mines to enable backfilling of flyash in abandoned mines and reclamation of low lying areas. It is pertinent to mention herein that the revision of the existing Flyash Notification,1999 and its amendments in order to ensure effective utilisation of fly ash is also in process.

6. It is submitted that National Highways Authority of India vide email dated 30.09.2019 has submitted action taken on the recommendation of the expert committee for enhanced utilization of fly-ash. A copy of the same is annexed herein as **Annexure- E**

7. It is submitted that this Ministry has issued letters through email dated 02.03.2020 to Ministry of Power,

Ministry of Road Transport & Highways, Ministry of Coal, Ministry of Housing and Urban affairs, Central Pollution Control Board, National Thermal Power Corporation and National Highways Authority of India requesting them to furnish the progress report/action taken report. A copy of the letter dated 02.03.2020 is annexed herein as **Annexure- F.**

8. It is pertinent to mention herein that, Ministry of Coal has submitted ATR via email dated 06.11.2019 08.04.2020, 03.09.2020 respectively on the recommendations of Expert Committee i.e. "mining companies should share their experience of mines backfilling to enhance fly ash utilisation in this sector". OSPCB had conducted detailed study on impact of fly ash filling in mines in Odisha. A copy of the same is annexed herein as **Annexure- G**

9. It is submitted that MoEF&CC has shared the report on fly ash filling experience in CIL mines and also the list of mines identified by Ministry of Coal for fly ash filling with CPCB and Ministry of Power with request to furnish progress report in this regard vide letter dated 27.04.2020.

10. It is submitted that this Ministry has issued a reminder letter vide email dated 07.07.2020 to Ministry of Power, Ministry of Road Transport & Highways, Ministry of Housing and Urban affairs, Central Pollution Control board, National Thermal Power Corporation, National Highways Authority of India requesting to furnish the progress report/action taken report at the earliest. A copy of the same is annexed herein as **Annexure- H**

11. That, the compliance report is being submitted in support of the compliance of the order dated 27.02.2019 by this Hon'ble Tribunal. It's therefore, in facts and circumstances the compliance report may kindly be taken on record in the interest of justice.

DEPONENT

Item Nos. 01 to 03 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 117/2014
WITH
Original Application No. 499/2014
WITH
Original Application No. 102/2014
(M.A. No. 858/2014, M.A. No.872/2014, 42/2015, 287/2015, 694/2015 & 580/2016)

Shantanu Sharma Applicant(s)

Versus

Union of India & Ors. Respondent(s)

WITH

Anupam Raghav & Anr. Applicant(s)

Versus

U.O.I. & Ors. Respondent(s)

WITH

Sandplast (India) Ltd. & Ors. Applicant(s)

Versus

MoEF & Ors. Respondent(s)

Date of hearing: 20.11.2018

CORAM : HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S.P. WANGDI, JUDICIAL MEMBER
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

For Applicant(s): Tasneema Ahmadi & Mahima Rathi, Advocates

For Respondent (s): Krishna Kumar Singh, Advocate for MoEF & CC
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Arun Mathur, Avneesh Arputham, Anuradha Arputham & Geetanjali, Advocates for State of Sikkim
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Deepak Anand, Advocate
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Abhishek Paruthi, Advocate for CPCB
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Mr. Shubham Bhalla, Advocate
Roopam Rai, Advocate
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K.V. Jagdishvaran & G. Indira, Advocates
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Debojit Borkakati, Advocate for State of Assam
Rajul Shrivastav, Advocate for State of MPPCB
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M. Paikaray, Advocate for State of SPCB
Devraj Ashok, Advocate for State of Karnataka
Raja Chatterjee, Piyush Sachdev & Abhinandini Yadav, Advocates for State of West Bengal
Anand Verma, S. Jain & S. Singh, Advocates
Ajit Pudussery & Ajeet Singh Verma, Advocates
Bharat Sangal & Isha Gupta, Advocates
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Puja Kalra, Advocate for North & South, MCD
Shashi Juneja, Advocate for State of Chhattisgarh
Dhananjaj Baijal & Nikhil Naggar, Advocates for AACB & TSPCB
Kshitij Mudgal, Advocate for DGMS
Hemantika Wahi & Puja Singh, Advocates for State of GPCB
Soumyajit Pani & Chitttaranjan Singh, Advocates for state of Odisha
Santosh Kumar & Sarthak Agarwal, Advocates for SAIL
Guntur Prabhakar, Guntur Pramod, Prashant Mathur, P. VEnkat Reddy & Prashant Tyagi, Advocates for State of A.P
Prashant Tyagi, Advocate for State of Talangana
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Atul Jha, Advocate
Sandeep Mahapatra, Advocate
Somesh Tiwari, Advocate for Jindal Stainless Ltd.
Jayant K Sud, Senior Advocate with Ranjith Kumar, Advocate
K. Mudgal, Advocate
Yogmaya Agnihotri, Advocate for CECB
Shubham Bhalla, Roopam Rai, Advocate
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Ravin Dubey, Advocate
Debovishi Bhuyan alongwith Mishal Vij, Advocate for State of Goa
Priyanka Sinha & Alok K Singh, Advocates for State of Jharkhand
Abhishek Gupta, Win Koul & Ayush Kr. Shrivastava, Advocates
Debarshi Bhadra, Advocate for NBCC Ltd.

Nishant Talwar, Advocate for State of Punjab
Daleep Dhyani, Advocate for UPPCB
Mukesh Verma, Advocate
Amit Tiwari, Advocate for State of UP
Jayesh Gaurav, Advocate for JSPCB
Rahul Khurana, Mishal Vij, Proxy Counsel for Anil Grover, AAG for State of HSPCB
Mr. Shoeab, Gautam Singh & Rudreshwar Singh, Advocates for BSPCB
Debarshi Bhiyan, Advocate for GSPCB

ORDER

1. These matters raise concern of management of fly ash generated by the Thermal Power Plants (TPP). We may refer to the pleadings in Original Application No. 117/2014, Shantanu Sharma Vs. Union of India & Ors. Other matters are said to be identical.
2. The applicant claims to be interested in protection of environment and forest. He claims to be aggrieved by non-implementation of Notifications issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC) for proper utilization of fly ash generated by the coal and lignite based TPP.
3. Case of the applicant is that non-utilization and improper disposal of fly ash leads to increase in air pollution and causes severe health problems. It also affects horticulture and agricultural crops. As at present, there are increased ash pond areas and increased height of ash dykes. Apart from air pollution, there is pollution of surface water and ground water. Major pollutants in fly ash are Arsenic and Mercury. Both the said pollutants are injurious for the land and the water bodies. Thus, there is need for 100% utilization of fly ash by all possible means such as conversion to ash based products, preventing its washing away or flying in the air. MoEF&CC has failed to ensure proper monitoring mechanism inspite of issuing notification on the subject.
4. Notification dated 14.09.1999 required use of atleast 25% of the ash for clay bricks or tiles or blocks for use in construction

activities. The Delhi High Court vide judgment dated 05.08.2004 in Writ Petition (C) No. 2145/1999 directed the Government to make use of fly ash mandatory in roads apart from using it in bricks for construction. Land, electricity and water is required to be made available for promoting ash based production units. Vide amendment dated 03.11.2009, provision was made for its use in manufacturing of building material and in construction activity to preserve top soil by restricting excavation for disposal. Since quantum of fly ash has increased, the extent of fly ash required to be used was also increased.

5. In view of more and more concern on account of failure of efficacy of the measures already taken, a working group was constituted by the Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Govt. of India. In its report submitted in the year 2011, the said group *inter-alia* observed that increase in generation of fly ash led to increase in the requirement of land and thus target has to be of 100% utilization as against 60% utilization which was happening. The disposal process lacked transparency and it was necessary that each thermal power plant displays complete information. Other measures adopted include policy of financial institutions to require compliance of fly ash as a condition for grant of loan and incentives in rate of excise duty. The applicant has also referred to the report jointly published by the World Bank and the Department of Economic Affairs, Govt. of India pointing out the deficiencies in pro-active government policies on the subject.

6. We may now refer to the Notifications on the subject. Vide Notification dated 14.09.1999, the MoEF&CC issued directions requiring manufacturers of clay bricks or tiles or blocks or construction activities to mix atleast 25% of ash which is to be ensured by the Pollution Control Boards/Committees by

canceling the consent order for brick kilns or mining leases. Every thermal power plant was required to make available such ash and phase out dumping and disposal in three years to the extent of 30%, and in six years the remaining. This applied to plants permissioned subject to Environmental Clearance having such conditions. The remaining are required to phase-out the same in 15 years and compliance was required to be furnished to the Central Pollution Control Board and the concerned State Pollution Control Boards/Committees. The Electricity Boards, NTPC and the management of the power plants are to facilitate making available land, electricity and water for manufacturing activities and also to provide access to the ash lifting area and furnish annual implementation report. Manufacturers of ash based products such as cement, blocks, brick panels were to operate as per the guidelines laid down by the Bureau of Indian Standards, Indian Bureau of Mines, Indian Road Congress, Central Building Research Institute, Roorkee, Central Road Research Institute, New Delhi, Building Materials and Technology Promotion Council, New Delhi, Central Public Works Department, State Public Works Departments and other Central and State Government agencies. The said authorities are to prescribe the use of ash and ash based products in schedules of specifications. Local authorities are to specify such requirement in building bye-laws.

7. Vide Notification dated 27.08.2003, certain amendments were made particularly to the effect that construction agencies were required to use the fly ash to the extent of 100% in a phased manner upto 31.08.2007.
8. Next Notification is dated 03.11.2009, revising the timelines and the period for implementation. The revised timelines apply to the construction agencies as well as thermal power plants as per

details mentioned in the said Notification. The said Notification also provided for shifting of the fly ash by filling empty mined voids by stowing.

9. The report of the Working Group of Cement Industries for 12th Five Year Plan (2012-2017) by the Department of Industrial Policy and Promotion, Ministry of Commerce and Industry goes into the extent of the problems and challenges in tackling the issue. The report shows that if the fly ash generated is not consumed, the cost on the economy by way of disposal risks and threat to health will be very high. Thus, to conserve top soil and prevent dumping and disposal on land, proper disposal of fly ash was significant. It was recommended that the Ministry of Power, Govt. of India should make proper assessment of the level of fly ash generation. The fly ash need not be required to be supplied free by the cement manufacturers to small bricks manufacturers and should be utilized by the cement plants for their own consumption. If the cement plants are required to purchase the fly ash at a cost, it will require transportation and add to the cost unnecessarily.

10. We now note the stand of the respondents. The Ministry of Finance and Revenue, Govt. of India in its reply has stated that the excise duty is 2% without CENVAT credit and 6% with CENVAT credit. Fly ash products are covered by SSI exemption. No excise duty is payable upto a clearance value of Rs. 1.5 crores.

11. The Reserve Bank of India has stated that the Banks have been advised to have an appropriate policy in this regard in the matter of giving loans.

12. The MoEF&CC has referred to the Notifications issued from time to time to deal with the problem. In respect of thermal power

stations in its operation before 03.11.2009, extent of fly ash utilizations is as per following table:

Sr. No.	Percentage Utilization of Fly Ash	Target Date
1.	At least generation 50% of fly ash	One year from the date of issue of this notification.
2.	At least generation 60% of fly ash	Two years from the date of issue of this notification.
3.	At least generation 75% of fly ash	Three years from the date of issue of this notification
4.	At least generation 90% of fly ash	Four years from the date of issue of this notification
5.	At least generation 100% of fly ash	Five years from the date of issue of this notification

13. For those commissioned thereafter, the extent of fly ash utilization is as follows:

Sr. No.	Percentage Utilization of Fly Ash	Target Date
1.	At least generation 50% of fly ash	One year from the date of issue of commissioning.
2.	At least generation 70% of fly ash	Two years from the date of issue of commissioning.
3.	At least generation 90% of fly ash	Three years from the date of issue of commissioning.
4.	At least generation 100% of fly ash	Four years from the date of issue of commissioning.

14. Conditions prescribed for utilization of fly ash are as follows:

"(a) the pond ash should be made available free of cost 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.

(b) at least 20% of dry ESP fly ash shall be made available free of cost to units manufacturing fly ash or clay-fly ash bricks, blocks and tiles on a priority basis over other users and 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."

15. Under the above notification, a Monitoring Committee is to be constituted in every State/Union Territory under the Chairmanship of the Secretary, Department of Environment with representatives from Department of Power, Department of Mining, Road and Building Construction Department and State Pollution Control Board. The Committee is required to deal with

any unresolved issue by Dispute Settlement Committee in addition to the monitoring and facilitating the implementation of the notification.

16. Monitoring Committee constituted by the MoEF&CC is to have members from Ministry of Coal., Ministry of Power., Central Pollution Control Board., Central Electricity Authority., Head, Fly Ash Unit of the Department of Science and Technology and Building Material Technology Promotion Council.

17. It is further stated, in the affidavit of the MoEF&CC, that as per the information received from Central Electricity Authority (CEA), during a meeting, the fly ash generation from 138 thermal power plants is reported to be 163.56 million tons during the year 2012-13. The overall utilization of fly ash was 100.73 million ton, which is about 61.37% of the total fly ash generated. During the year 2012-13, out of 138 (one hundred thirty-eight) thermal power stations for which data was received, 66 (sixty-six) power stations have achieved the targets of fly ash utilization as stipulated in the notification dated 03.11.2009. The remaining 33 (thirty-three) plants have achieved the level of fly ash utilization up to 75%. The 19 (nineteen) plants have achieved the level of fly ash utilization up to 60%.

18. CPCB has given a chart showing progress of fly ash generation and utilization from 1996 to 2012. Some of the State Pollution Control Boards/Committees have filed their affidavits indicating the extents to which utilization of fly ash has taken place.

19. Vide Notification dated 25.01.2016, further amendment was made to the Notification dated 14.09.1999 mainly to the effect that the area within which the fly ash is to be utilized has been increased to 300 kms. The time period to comply with the requirements of 100% utilization of fly ash was extended to 31.12.2017.

20. The matter has been considered on several dates in the last four and a half years. Reference may be made to some of the orders passed.

21. Vide order dated 06.01.2016, the MoEF&CC, the State Governments/Union Territories were required to furnish the details of the Monitoring Committees and if such Committees were not constituted as per the mandate of the Notification, the same were directed to be constituted.

22. On 03.01.2018, the States/Union Territories were directed to furnish their action plans for utilization of fly ash produced and generated by thermal power plants in accordance with the Notifications.

23. On 16.02.2018, it was noted that only eight States have submitted their action plans. MoEF&CC was directed to expedite the collection of action plans from the concerned States.

24. On 20.03.2018, the Chief Secretaries of the States, who had failed to submit action plans, were again required to do so.

25. On 12.07.2018, it was stated that 20 States have submitted their action plans out of which 13 were not complete or satisfactory. The MoEF&CC was directed to monitor the compliance of the earlier orders referred to above and submit a status report.

26. Accordingly, status report has been filed before this Tribunal on 07.09.2018 by the MoEF&CC stating that no fly ash is generated in 15 States/UTs namely Goa, Himachal Pradesh, Jammu & Kashmir, Kerala, Manipur, Mizoram, Nagaland, Sikkim, Tripura, Andaman and Nicobar, Chandigarh, Daman & Diu, Dadra & Nagar Haveli, Lakshadweep and Pondicherry. Accordingly, the said States and Union Territories and their authorities be deleted from the array of parties.

27. Twenty States have given their action plans. Only State of Arunachal Pradesh has not furnished any action plan. Since there is nothing to show that there is any fly ash generation in the said

State, the said State or its authorities are also deleted from array of parties. We do not understand why deletion of unnecessary parties was never sought.

28. The position of each of the remaining twenty States has been mentioned. It may be noted that though the last date for achieving 100% utilization was 31.12.2017 and the said date has not been extended, the States have sought extension of time by 2 to 5 years upto the year 2023 which is wholly uncalled for. This Tribunal has no jurisdiction to grant any extension of time in conflict with the mandate of notification under the Environment (Protection) Act, 1986, particularly when such extension will enable harm to environment, in violation of statutory scheme. It is also stated by some of the States that action plans to achieve 100% utilization of fly ash has not even been furnished by some of the Thermal Power Plants.

29. We may also note that the NITI Aayog, vide order dated 12.06.2018, constituted a Committee headed by Joint Secretary, MoEF&CC, Govt. of India, to develop a focused strategy for best utilization of fly ash to manufacture end products. Issues to be gone into by the Committee are:- revisiting existing notifications / guidelines, transportation of fly ash, better utilization in MSME Sector, cement and allied industries, use of mobile app in data base, guidelines for ash parks, regulation of red bricks, incentives for 100% utilization, incentives to TPPs for new innovations. Draft report was circulated by MoEF&CC on 16.10.2018. The Committee noted that the existing notification needed review and the same were not being fully implemented.

30. In view of the above, only question for consideration is the directions to be issued on account of failure of 100% utilization of fly ash which has admitted adverse impact on public health and to give effect to the 'Precautionary Principle' and the 'Polluter Pays'

Principle to be applied under Section 20 the National Green Tribunal Act, 2010.

31. Since non-utilization of 100% fly ash, especially after 31.12.2017, the date fixed in the Notification of the MoEF&CC dated 25.01.2016, invites penal consequences under the provisions of the Environment Protection Act, 1986, liability in this regard is not only of the persons responsible for non-utilization but also for generators of the fly ash. The generator cannot avoid responsibility for due disposal of any residue pollutants on account of its activity. The principle of 'extended producer's liability' is well recognized as part of 'Sustainable Development'. Applying the 'Precautionary Principle', the permission to dump fly ash in the mined voids has to be subject to all precautionary measures necessary for environment protection. Area of utilization of fly ash has been extended to 300 kms, which may call for more stringent conditions to avoid damage to the environment.

32. The adverse effect of fly ash mismanagement is well acknowledged in decision of Courts[1] as well as by public authorities[2].

33. We are of the view that a Joint Committee of the representatives of the Ministry of Environment, Forest and Climate Change, Central Pollution Control Board and IIT Roorkee and any other member considered necessary by MoEF&CC needs to be forthwith constituted to finalize action plan covering all aspects so as to not only achieve 100% utilization of fly ash but also to ensure its scientific and environmentally sound disposal. The Committee will also be required to determine the amount of damages to be paid for the violation of requirement of utilization of fly ash. Needless to say that statutory authorities under the Environment

[1] Occupational Health and Safety Association v. Union of India & Ors. (2004) 3 SCC 547 ¶12-15

[2] http://pib.nic.in/PressReleseDetail.aspx?PRID=1520080, https://economictimes.indiatimes.com/news/politics-and-nation/pmo-asks-agencies-to-increase-usage-of-fly-ash-by-10-times/articleshow/65814656.cms, https://energy.economictimes.indiatimes.com/news/power/from-coal-production-to-renewable-power-obligations-niti-aayog-lays-down-its-3-year-agenda-for-indias-energy-sector/58486230, http://pib.nic.in/newsite/PrintRelease.aspx?relid=179785

(Protection) Act, 1986, the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974 are entitled to assess and recover damages on 'Polluter Pay's Principle' in exercise of incidental powers to protect environment. The Committee may determine any other allied or incidental issue.

34. Accordingly, we direct constitution of such a Committee by the MoEF&CC forthwith. The Committee may give its report within two months from the date of its assuming charge to the MoEF&CC.

35. The report of the Committee may be complied with by all concerned, subject to any challenge to such report, in accordance with law.

36. Pending submissions of such report, we direct all Thermal Power Stations who have failed to dispose of 100% fly ash up to 31.12.2017, to deposit damages for environment restoration as follows:

Sl. No.	**Capacity of the Thermal Power Plant**	**Cost of damages**
1.	Thermal Power Plants upto the capacity of 500 MW	Rs. 1 Crore
2.	Thermal Power Plants upto the capacity of 1000 MW	Rs. 3 Crores
3.	Thermal Power Plants beyond the capacity of 1000 MW	Rs. 5 Crores

37. The above amount may be deposited with the CPCB within one month from today, failing which interest @ 12% p.a. will be payable for the delayed period. The amount may be spent on restoration and restitution of the environment.

38. No damages will be payable by the Thermal Power Plants which have utilized 100% of the ash generated by it in accordance with law up to 31.12.2017 and disposing it in scientific manner. In case, any such claim is found to be false by the Committee, the amount of penalty payable may be up to five times.

39. The MoEF&CC may furnish an action taken report to this Tribunal on or before 31.03.2019 by e-mail at ngt.filing@gmail.com. All the applications are disposed of.

40. Report may be put up for consideration on 9th April, 2019.

Adarsh Kumar Goel, CP

S.P. Wangdi, JM

K. Ramakrishnan, JM

Dr. Nagin Nanda, EM

November 20, 2018
dv

Item Nos. 02 to 04 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No.117/2014
WITH

Original Application No. 499/2014
WITH

Original Application No. 102/2014
(M.A. No. 168/2019, M.A. No. 12/2020 & M.A. No. 13/2020)

(With report dated 10.01.2020)

Shantanu Sharma Applicant(s)

Versus

Union of India & Ors. Respondent(s)

WITH

Anupam Raghav & Anr. Applicant(s)

Versus

U. O. I. & Ors. Respondent(s)

WITH

Sandplast (India) Ltd. & Ors. Applicant(s)

Versus

MoEF & Ors. Respondent(s)

Date of hearing: 27.01.2020
Date of uploading on the website: 12.02.2020

CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S.P WANGDI, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

ORDER

1. This order may be read in continuation of order dated 20.11.2018 on the subject of management of fly ash generated by the Thermal Power

Plants (TPPs). This Tribunal considered impact of non-utilization and proper disposal of fly ash by the TPPs on air quality, surface water, ground water, health and environment. After considering the notifications issued by the Ministry of Environment and Forest & Climate Change (MoEF&CC) requiring 100% utilization of fly ash by 31.12.2017 and applicable norms for utilization of fly ash, this Tribunal directed preparation of action plans to achieve 100% utilization of fly ash and for its scientific disposal. The Committee comprising MoEF&CC, CPCB and IIT Roorkee was to determine the liability of the TPPs for damages on 'Polluter Pays' principle.

2. We may note only the case set out by the applicant in O.A. No. 117/2014 as the grievance in other connected matters is identical. It is submitted that non-utilization and improper disposal of fly ash leads to increase in air pollution and causes severe health problems. It also affects horticulture and agricultural crops. As at present, there is an increase in ash pond areas and increased height of ash dykes. Apart from air pollution, there is pollution of surface water and ground water. Major pollutants in fly ash are Arsenic and Mercury. Both the said pollutants are injurious for the land and the water bodies. Thus, there is need for 100% utilization of fly ash by all possible means such as conversion to ash based products, preventing its washing away or flying in the air.

3. In substance, case of the applicant is that air pollution and water pollution is continuing against mandate of law for which no remedial action was being taken. MoEF&CC has failed to ensure proper monitoring and compliance mechanism inspite of issuing notification

on the subject. This is also resulting in failure to enforce the mandate of law under Air Act, 1981; Water Act, 1974 and Environment (Protection) Act, 1986 (EP Act), apart from damage caused to the environment and public health. This is also infringement of 'Sustainable Development' and 'Precautionary' principles. As a consequence of continuing air and water pollution, 'Polluter Pays' principle also needs to be invoked.

4. Notification dated 14.09.1999 was issued by the MoEF&CC which required use of atleast 25% of the ash for clay bricks or tiles or blocks for use in construction activities. The Delhi High Court vide judgment dated 05.08.2004 in Writ Petition (C) No. 2145/1999 directed the Government to make use of fly ash mandatory in roads apart from using it in bricks for construction. Land, electricity and water is required to be made available for promoting ash based production units. Vide amendment dated 03.11.2009, provision was made for its use in manufacturing of building material and in construction activity to preserve top soil. Since quantum of fly ash has increased, the extent of fly ash required to be used in terms of above notification was also increased.

5. In view of the rising concern on account of failure of efficacy of the measures already taken, a Working Group was constituted by the Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Govt. of India. In its report submitted in the year 2011, the said group *inter-alia* observed that increase in generation of fly ash has led to increase in requirement of land and thus target has to be of 100% utilization as against 60%. The disposal process lacked

transparency and it was necessary that each thermal power plant displays complete information in terms of compliance to environmental norms. Other measures adopted include policy of financial institutions to require compliance of fly ash as a condition for grant of loan and incentives in terms of excise duty. The applicant has also referred to the report jointly published by the World Bank and the Department of Economic Affairs, Govt. of India pointing out the deficiencies in pro-active government policies on the subject.

6. We may now refer to the Notifications on the subject. We have already mentioned that vide Notification dated 14.09.1999, the MoEF&CC issued directions requiring manufacturers of clay bricks or tiles or blocks or construction activities to mix atleast 25% of ash which is to be ensured by the Pollution Control Boards/Committees by canceling the consent order for brick kilns or mining leases. Every thermal power plant was required to make available such ash and phase out dumping and disposal in three years to the extent of 30%, and the remaining in six years. This applied to plants permissions being issued subject to Environmental Clearance prescribing such conditions. The remaining are required to be phased-out in 15 years compliance regarding which made necessary to be furnished to the Central Pollution Control Board and the concerned State Pollution Control Boards/Committees. The Electricity Boards, NTPC and the management of the power plants are to facilitate making available land, electricity and water for manufacturing activities and also to provide access to the ash lifting area and furnish annual implementation report. Manufacturers of ash based products such as cement, blocks, brick panels were to operate as per the guidelines

laid down by the Bureau of Indian Standards, Indian Bureau of Mines, Indian Road Congress, Central Building Research Institute, Roorkee, Central Road Research Institute, New Delhi, Building Materials and Technology Promotion Council, New Delhi, Central Public Works Department, State Public Works Departments and other Central and State Government agencies. The said authorities are to prescribe the use of ash and ash based products in schedules of specifications. Local authorities are to specify such requirement in building bye-laws.

7. Vide Notification dated 27.08.2003, certain amendments were made particularly to the effect that construction agencies were required to use the fly ash to the extent of 100% in a phased manner upto 31.08.2007.

8. Next Notification is dated 03.11.2009, revising the timelines and the period for implementation. The revised timelines apply to the construction agencies as well as thermal power plants as per details mentioned in the said Notification. The said Notification also provided for shifting of the fly ash by filling empty mined voids by stowing.

9. In its reply, the MoEF&CC has referred to the Notifications issued from time to time to deal with the problem. In respect of thermal power stations in its operation before 03.11.2009, extent of requirement of fly ash utilizations is as per following table:

Sr. No.	**Percentage Utilization of Fly Ash**	**Target Date**
1.	At least generation 50% of fly ash	One year from the date of issue of this notification.

2.	At least generation 60% of fly ash	Two years from the date of issue of this notification.
3.	At least generation 75% of fly ash	Three years from the date of issue of this notification
4.	At least generation 90% of fly ash	Four years from the date of issue of this notification
5.	At least generation 100% of fly ash	Five years from the date of issue of this notification

10. For those commissioned after 03.11.2009, the extent of requirement of fly ash utilization is as follows:

Sr. No.	**Percentage Utilization of Fly Ash**	**Target Date**
1.	At least generation 50% of fly ash	One year from the date of issue of commissioning.
2.	At least generation 70% of fly ash	Two years from the date of issue of commissioning.
3.	At least generation 90% of fly ash	Three years from the date of issue of commissioning.
4.	At least generation 100% of fly ash	Four years from the date of issue of commissioning.

11. Conditions prescribed for utilization of fly ash are as follows:

"(a) the pond ash should be made available free of cost 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.

(b) at least 20% of dry ESP fly ash shall be made available free of cost to units manufacturing fly ash or clay-fly ash bricks, blocks and tiles on a priority basis over other users and 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."

12. Under the above notification, a Monitoring Committee is to be constituted in every State/Union Territory under the Chairmanship of the Secretary, Department of Environment with representatives from Department of Power, Department of Mining, Road and Building Construction Department and State Pollution Control Board. The Committee is required to deal with any unresolved issue by Dispute Settlement Committee in addition to the monitoring and facilitating the implementation of the notification. Monitoring Committee constituted by the MoEF&CC is to have members from Ministry of Coal, Ministry of Power, Central Pollution Control Board, Central Electricity Authority, Head, Fly Ash Unit of the Department of Science and Technology and Building Material Technology Promotion Council.

13. It is further stated in the affidavit of the MoEF&CC that as per the information received from Central Electricity Authority (CEA), during a meeting, the fly ash generation from 138 thermal power plants is reported to be 163.56 million tons during the year 2012-13. The overall utilization of fly ash was 100.73 million ton, which is about 61.37% of the total fly ash generated. During the year 2012-13, out of 138 (one hundred thirty-eight) thermal power stations for which data was received, 66 (sixty-six) power stations have achieved the targets of fly ash utilization as stipulated in the notification dated 03.11.2009. The remaining 33 (thirty-three) plants have achieved the level of fly ash utilization up to 75%. The 19 (nineteen) plants have achieved the level of fly ash utilization up to 60%.

14. CPCB has given a chart showing progress of fly ash generation and utilization from 1996 to 2012. Some of the State Pollution Control Boards/Committees have filed their affidavits indicating the extents to which utilization of fly ash has taken place.

15. Vide Notification dated 27.01.2016, further amendment was made to the Notification dated 14.09.1999 mainly to the effect that the area within which the fly ash is to be utilized has been increased to 300 kms. The time period to comply with the requirements of 100% utilization of fly ash was extended to 31.12.2017.

16. The matter has been considered on several dates in the last five and a half years. Reference may be made to some of the orders passed.

17. Vide order of this Tribunal dated 06.01.2016, the MoEF&CC, the State Governments/Union Territories were required to furnish the details of the Monitoring Committees and if such Committees were not constituted as per the mandate of the Notification, the same were directed to be constituted. On 03.01.2018, the States/Union Territories were directed to furnish their action plans for utilization of fly ash produced and generated by thermal power plants in accordance with the Notification. On 16.02.2018, it was noted that only eight States have submitted their action plans. MoEF&CC was directed to expedite the collection of action plans from the concerned States. On 20.03.2018, the Chief Secretaries of the States, who had failed to submit action plans, were again required to do so. On 12.07.2018, it was stated that 20 States have submitted their action plans out of which 13 were not complete or satisfactory. The

MoEF&CC was directed to monitor the compliance of the earlier orders referred to above and submit a status report.

18. The matter was thereafter reviewed on 20.11.2018 in the light of the status report filed by MoEF&CC on 07.09.2018. The Tribunal observed as follows:-

> *"1to25 xxx xxx xxx*
>
> *26. Accordingly, status report has been filed before this Tribunal on 07.09.2018 by the MoEF&CC stating that no fly ash is generated in 15 States/UTs namely Goa, Himachal Pradesh, Jammu & Kashmir, Kerala, Manipur, Mizoram, Nagaland, Sikkim, Tripura, Andaman and Nicobar, Chandigarh, Daman & Diu, Dadra & Nagar Haveli, Lakshadweep and Pondicherry. Accordingly, the said States and Union Territories and their authorities be deleted from the array of parties.*
>
> *27. Twenty States have given their action plans. Only State of Arunachal Pradesh has not furnished any action plan. Since there is nothing to show that there is any fly ash generation in the said State, the said State or its authorities are also deleted from array of parties. We do not understand why deletion of unnecessary parties was never sought.*
>
> *28. The position of each of the remaining twenty States has been mentioned. It may be noted that though the last date for achieving 100% utilization was 31.12.2017 and the said date has not been extended, the States have sought extension of time by 2 to 5 years upto the year 2023 which is wholly uncalled for. This Tribunal has no jurisdiction to grant any extension of time in conflict with the mandate of notification under the Environment (Protection) Act, 1986, particularly when such extension will enable harm to environment, in violation of statutory scheme. It is also stated by some of the States that action plans to achieve 100% utilization of fly ash has not even been furnished by some of the Thermal Power Plants.*
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> *29. We may also note that the NITI Aayog, vide order dated 12.06.2018, constituted a Committee headed by Joint Secretary, MoEF&CC, Govt. of India, to develop a focused strategy for best utilization of fly ash to manufacture end products. Issues to be gone into by the Committee are:- revisiting existing notifications / guidelines, transportation of fly ash, better utilization in MSME Sector, cement and allied industries, use of mobile app in data base, guidelines for ash parks, regulation of red bricks, incentives for 100% utilization,*

incentives to TPPs for new innovations. Draft report was circulated by MoEF&CC on 16.10.2018. The Committee noted that the existing notification needed review and the same were not being fully implemented.

30. In view of the above, only question for consideration is the directions to be issued on account of failure of 100% utilization of fly ash which has admitted adverse impact on public health and to give effect to the 'Precautionary Principle' and the 'Polluter Pays' Principle to be applied under Section 20 the National Green Tribunal Act, 2010.

31. Since non-utilization of 100% fly ash, especially after 31.12.2017, the date fixed in the Notification of the MoEF&CC dated 25.01.2016, invites penal consequences under the provisions of the Environment Protection Act, 1986, liability in this regard is not only of the persons responsible for non-utilization but also for generators of the fly ash. The generator cannot avoid responsibility for due disposal of any residue pollutants on account of its activity. The principle of 'extended producer's liability' is well recognized as part of 'Sustainable Development'. Applying the 'Precautionary Principle', the permission to dump fly ash in the mined voids has to be subject to all precautionary measures necessary for environment protection. Area of utilization of fly ash has been extended to 300 kms, which may call for more stringent conditions to avoid damage to the environment.

*32. The adverse effect of fly ash mismanagement is well acknowledged in decision of Courts[1] as well as by public authorities[2].***"**

19. After above consideration, the Tribunal constituted a joint Committee to finalise action plan to achieve 100% utilization of fly ash and to determine the amount of damages to be paid for the violation by the TPPs and also directed interim compensation for the TPPs who are failed to dispose of 100% fly ash upto 31.12.2017. The operative part of the order is:-

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[1]Occupational Health and Safety Association v. Union of India &Ors. (2004) 3 SCC 547 ¶12-15
[2]http://pib.nic.in/PressReleseDetail.aspx?PRID=1520080, https://economictimes.indiatimes.com/news/politics-and-nation/pmo-asks-agencies-to-increase-usage-of-fly-ash-by-10-times/articleshow/65814656.cms, https://energy.economictimes.indiatimes.com/news/power/from-coal-production-to-renewable-power-obligations-niti-aayog-lays-down-its-3-year-agenda-for-indias-energy-sector/58486230, http://pib.nic.in/newsite/PrintRelease.aspx?relid=179785

"1 to 32 xxx xxx xxx

33. We are of the view that a Joint Committee of the representatives of the Ministry of Environment, Forest and Climate Change, Central Pollution Control Board and IIT Roorkee and any other member considered necessary by MoEF&CC needs to be forthwith constituted to finalize action plan covering all aspects so as to not only achieve 100% utilization of fly ash but also to ensure its scientific and environmentally sound disposal. The Committee will also be required to determine the amount of damages to be paid for the violation of requirement of utilization of fly ash. Needless to say that statutory authorities under the Environment (Protection) Act, 1986, the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974 are entitled to assess and recover damages on 'Polluter Pay's Principle' in exercise of incidental powers to protect environment. The Committee may determine any other allied or incidental issue.

34. Accordingly, we direct constitution of such a Committee by the MoEF&CC forthwith. The Committee may give its report within two months from the date of its assuming charge to the MoEF&CC.

35. The report of the Committee may be complied with by all concerned, subject to any challenge to such report, in accordance with law.

36. Pending submissions of such report, we direct all Thermal Power Stations who have failed to dispose of 100% fly ash up to 31.12.2017, to deposit damages for environment restoration as follows:

Sl. No.	***Capacity of the Thermal Power Plant***	***Cost of damages***
1.	*Thermal Power Plants upto the capacity of 500 MW*	*Rs. 1 Crore*
2.	*Thermal Power Plants upto the capacity of 1000 MW*	*Rs. 3 Crores*
3.	*Thermal Power Plants beyond the capacity of 1000 MW*	*Rs. 5 Crores*

37. The above amount may be deposited with the CPCB within one month from today, failing which interest @ 12% p.a. will be payable for the delayed period. The amount may be spent on restoration and restitution of the environment.

38. No damages will be payable by the Thermal Power Plants which have utilized 100% of the ash generated by it in accordance with law up to 31.12.2017 and disposing it in scientific manner. In case, any such claim is found to be false by the Committee, the amount of penalty payable may be up to five times.

39. The MoEF&CC may furnish an action taken report to this Tribunal on or before 31.03.2019 by e-mail at ngt.filing@gmail.com. All the applications are disposed of."

20. We may note that vide order dated 13.12.2018 in Diary No. 46100/2018, *Association of Power Producers v. Sandplast (India) Ltd. & Ors.*, the Hon'ble Supreme Court gave liberty to the Association of Power Producers to move this Tribunal. This led to filing of M.A. No. 1798/2018 etc. for recall of order dated 20.11.2018 on the ground that some of the TPPs had not completed period of five years which was permissible for disposal of the fly ash. This plea was rejected in the light of the Notification dated 27.01.2016 fixing 31.12.2017 as outer limit for disposal of the fly ash, irrespective of date of commissioning of power plant. The applications were accordingly disposed of on 03.01.2019. M.A. No. 08/2019 etc. were disposed of on 22.01.2019 giving liberty to the TPPs in question to move the Committee for being heard on the quantum of compensation. M.A. No. 50/2019 and other applications were disposed of on 12.03.2019 giving liberty to the TPPs to move the Committee constituted by this Tribunal. Similar further order was passed on 02.05.2019 in M.A. Nos. 108/2019 to 119/2019.

21. Pursuant to order dated 20.11.2018, the joint Committee has filed its report on 20.12.2019 on the subject of action plan to achieve 100% fly ash utilization by the TPPs and liability of the TPPs to pay compensation. The report mentions the meetings held for the purpose and consideration of the enhanced utilization of fly ash by way of Ash based building construction material such bricks/blocks/tiles; road, flyover embankment construction, Development of low- laying areas,

Reclamation of abandoned mine voids, Ash utilization as soil conditioners of agriculture. As per CPCB, about 77% of total fly ash generated per annum is utilized. This indicates a gap in terms of 23% which needs immediate action. In terms of legacy waste, the total quantum is 1647 million tonnes as on 31.03.2019.

22. The Committee recommended one year time to achieve 100% utilization of fly ash where the utilization currently was more than 85% and two years for the remaining. The action plans of 118 individual units have been annexed. The compliance status is to be reviewed quarterly and on annual basis. On the subject of environmental compensation, it is recommended that compensation should be imposed only on non-pit head TPPs.

It has been recommended by the Committee that raising of ash dyke of ash pond may be considered as fly ash utilization during initial five years. Thereafter, TPPs can use fly ash for strengthening of ash dyke as per engineering requirement but can claim only 5-7% of fly ash generation as utilization.

With regard to breach sites at Vidhyanchal TPP and Essar TPP in Singrauli area, the Committee has recommended that MP Pollution Control Board to ensure effective restoration/remediation of affected sites urgently.

With regard to utilization of unutilized accumulated fly ash (pond ash), the recommendation is to permit three years for non-pit head TPPs and four years for pit head TPPs apart from current utilization w.e.f. April 2021. The recommendations pertaining to

Ministry of Power; Ministry of Coal; NTPC; CPCB; Central Electricity Authority; NHAI; MoEF&CC; Ministry of Housing and Urban Affairs; Ministry of Human Resource Development; Bureau of Indian Standards (BIS); Department of Consumer Affairs and IRC have been separately given. The Ministry of Power has also given its recommendations.

23. The Committee has given a mechanism for assessment of environmental compensation for non-compliance of targeted fly ash utilization by thermal power plant vide Annexure A-II of the said report and has proposed the scenarios viz. EC for plants commissioned before 03.11.2009 and EC for plants commissioned after 03.11.2009. The formula suggested by the joint Committee is as follows:-

3. Determination of Environmental Compensation (EC)

3.1 CPCB on the direction of the Hon'ble National Green Tribunal (NGT), Principal Bench in the matter of OA No. 593/2017 (WP (CIVIL) No. 375/2012, Paryavaran Suraksha Samiti & Anr. Vs. Union of India & Ors. has formulated following formula for levying the environmental compensation penalty due to non-compliance of the environmental standards/ violation of any directions by industries;

EC = PI × R × N × F × LF

= ₹ 30000 per day (80×250×1.5) × N × LF

EC = Environmental compensation/penalty (₹);

PI = Pollution Index of industrial sector (80 for red category of industries)

R = Rs in per day (₹ 250)

N = Number of days of violations.

F = Scale of operation of industrial sector, small 0.5, medium 1.0 and large 1.5

LF = Location factor, 1.5 if industry is located in critically polluted area/urban area/ ecologically sensitive area; otherwise 1

3.2 In light of the above environmental compensation (₹ 30000 per day×330 days per year = ₹ 9900000, say 1 crore per year), it is proposed that, EC may be imposed based on annual basis for compliance of flyash notification after December 31st, 2017 as below:

3.2.1 EC for plants commissioned before 3.11.2009

A: EC for year 2018 and 2019

EC = ₹ 1 crore/ year × C × P × LF

C : Capacity factor 1 for 500 MW and MW/500 for other capacity

P : Non-compliance during the year i.e. (100-% utilization during the year/100)

LF = Location factor, 1.5, if industry is located in critically polluted area/ urban area/ecologically sensitive area; otherwise 1

B: Annual EC for year 2020 onwards

EC= ₹1 crore/year C × P' × LF

P' : Overall non-compliance in terms of multiple factor of annual generation i.e. total accumulated flyash at the end of year divided by annual flyash generation at full capacity.

LF : Location factor, 1.5 if industry is located in critically polluted area/urban area/ ecologically sensitive area; otherwise1

3.2.2 EC for plants commissioned after 3.11.2009

A : EC for year 2018

EC= ₹1 crore/year C × P × LF

C : Capacity factor 1 for 500 MW and MW/500 for other capacity

P : Non-compliance during the year i.e. (100-% utilization during the year/100)

LF : Location factor, 1.5 if industry is located in critically polluted area/urban area/ ecologically sensitive area; otherwise1

B: Annual EC for year 2019 onwards

EC= ₹1 crore/year C × P' × LF

P' : Overall non-compliance in terms of multiple factor of annual generation i.e. total accumulated flyash at the end of year divided by annual flyash generation at full capacity.

LF : Location factor, 1.5 if industry is located in critically polluted area/urban area/ ecologically sensitive area; otherwise1

3.3 Temporary storage upto 90 days of generation of fly ash shall be allowed and no environmental compensation will be imposed for accumulated quantity.

24. We may now consider the above report and further course of action. In the first instance, the mechanism for assessment of Environmental Compensation has over looked certain scientific aspects and hence cannot be agreed to in totality. Location factor should be taken to 1.5 for all situations as the principal contributor to the environment degradation in the area is the TPP. Further, the Capacity Factor has been taken 1 for 350 MW and MW/350 for other capacity, instead of taking 500 MW as a base. Thus, the formula needs to be revised as follows:-

EC = Pl × R × N × F × LF
= ₹ 30000 per day (80 × 250 × 1.5) × N × LF
EC = Environmental compensation/penalty (₹)
Pl = Pollution Index of industrial sector (80 for red category of industries)
R = Rs in per day (₹ 250)
N = Number of days of violations.
F = Scale of operation of industrial sector, small 0.5, medium 1.0 and large 1.5
LF = Location factor, 1.5 for all situations as the principal contributor to environmental degradation in area is TPP.

Therefore, for 330 days per year, the said figure would come to ₹ 9900000 or say ₹ 1 crore per annum. In addition to above, the EC may be imposed on the basis of compliance of Fly Ash Notification after 31.12.2017 as below:

EC for 2018 & 2019:

EC = ₹ 1 crore/ year × C × P × LF
C : Capacity factor 1 for 350 MW and MW/350 for other capacity instead of taking 500 MW as a base.

P : Non-compliance during the year i.e. (100-% utilization during the year/100)
LF = Location factor, 1.5 for all situations as the principal contributor to environmental degradation in area is TPP.

EC for 2020:

EC = ₹ 1 crore/year × C × P' × LF
P' : Overall non-compliance in terms of multiple factor of annual generation i.e. total accumulated fly ash at the end of year divided by annual fly ash generation at full capacity
LF = Location factor, 1.5 for all situations as the principal contributor to environmental degradation in area is TPP.

Note: Temporary storage upto 90 days of generation of fly ash shall be allowed and no environmental compensation will be imposed for accumulated quantity.

25. Secondly, since as per applicable binding regime in terms of notification dated 27.01.2016 mentioned above, 100% fly ash utilization has to be ensured by 31.12.2017, there cannot be any time limit in conflict with the statutory notification. Further, there cannot be unlimited time for disposal of accumulated fly ash (legacy fly ash). Provisions of the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974 certainly attracted, apart from concepts of Sustainable Development, Precautionary and Polluter Pays principles, which are to be enforced under Section 20 of the National Green Tribunal Act, 2010 (NGT Act) but also are part of right to clean environment and, thus, right to life. While compensation has to be recovered for the damage caused, there cannot be any right to continue to damage the environment. Activity causing damage to the environment has to be prohibited, apart from action for prosecution for the violators of law,

including the Chief Executive Officers of the TPPs in question for continued violations.

26. Thirdly, we may also note that this Tribunal has noticed repeated and continuous defaults by the TPPs resulting in damage to the environment and public health for which compensation has been assessed by the experts under orders of the Tribunal.

In O.A. No. 453/2019, vide order dated 11.10.2019, this Tribunal considered reports of the MPPCB and UPPCB in respect of pollution by the TPPs in districts Singrauli and Sonebhadra respectively. It was found that damage was being caused to the water bodies including Rihand reservoir, surface and ground water and rivers like Son, Renu, Bijul, Kanhar, Gopad, Pankagan, Kathauta Kachan, etc. and streams/nalas like Ballia Nala, Chatka Nala, Kahuwa Nala, Tippa Jharia, Dongia Nala, etc. water was contaminated by toxic effluents discharged and was not fit for consumption.

MPPCB furnished its report dated 21.08.2019 recording a finding that pollution was taking place and recommending compensation as follows:-

"Details of imposed Environmental compensation

As per the Environmental Compensation guidelines framed by CPCB in compliance of order 31.08.2018 in O.A. 593/2017 the maximum environmental compensation is Rs. 30,000/- per day of non-compliance. The total amount of ***56,08,50,000/- (Fifty Six Crore Eight Lac Fifty thousand rupees)*** *may be imposed upon the 03 TPP & 08 NCL mining project against the non-compliance of the major notification, direction & recommendations issued since 2014.*

Summary of the days of non-compliance & Environmental compensation therefore is as tabulated below:

S. No.	Thermal power plant & Northern Coalfield Mine	Days of Non-compliance	Environmental Compensation in Rupees @ 30000/day
1.	M/s Essar Power MP Limited, Singrauli, MP	01	30,000/-
2.	M/s Sasan Power Limited, Singrauli, MP	1247	3,74,10,000/-
3.	M/s NTPC, Vindhyachal, Singrauli, MP	1389	4,16,70,000/-
4.	NCL, Nigahi, Singrauli	1825	5,47,50,000/-
5.	NCL, Gorbi Block-B, Singraulli	1843	5,52,90,000/-
6.	NCL, Khadia Project,	1825	5,47,50,000/-
7.	NCL, Amlohri area, Singraulli	2185	6,55,50,000/-
8.	NCL, Bina project	1825	5,47,50,000/-
9.	NCL, Dudhichua area	1825	5,47,50,000/-
10.	NCL, Jayant Project	2455	7,36,50,000/-
11.	NCL, Jhingurda area	2275	6,82,50,000/-

"

Likewise, UPPCB also found pollution by the TPPs in its report dated 28.08.2019 and compensation was recommended as follows:-

"Abridged Status of Environmental Compensation (EC)

S.No.	Name of industry (M/s)	EC in Rs.
1.	NTPC Thermal Power Plant, at Shaktinagar, Sonebhadra (U.P)	27,00,000
2.	Northern Coal Fields Limited (NCL) Project Dudhichua, Sonebhadra (U.P.)	1,30,20,000
3.	Northern Coal Fields Limited (NCL) Project Khadia, Sonebhadra (U.P.)	1,24,80,000
4.	Northern Coal Fields Limited (NCL) Project Krishnashila, Sonebhadra (U.P.)	6,11,40,000
5.	Northern Coal Fields Limited (NCL) Project Bina, Sonebhadra (U.P.)	64,50,000

6.	Northern Coal Fields Limited (NCL) Project Kakri, Sonebhadra (U.P.)	64,50,000
	NTPC Thermal Power Plant at Rihandnagar, Sonebhadra (U.P.)	45,90,000
7.	U.P. Power Corporation Ltd, Thermal Power Plant, Obra, Sonebhadra (U.P.)	6,11,40,000
8.	U.P. Power Corporation Ltd, Thermal Power Plant, Anpara, Sonebhadra (U.P.)	6,11,40,000
10.	LANCO Anpara Power Ltd, Thermal Power Plant, Anpara, Sonebhadra (U.P.)	23,70,000

"

Apart from recommendation for compensation, the UPPCB also recommended remediation measures and study of carrying capacity as follows:-

"11. Recommendations

In order to suitably address the critical issues of potential concerns to environment in the Singrauli Area, the Committee proposes following Recommendations subject to approval of Hon'ble NGT:

a. *In keeping with the strict compliance of this referenced Order of Hon'ble NGT, the Statutory Authorities may take note of the findings of this report and ensure appropriate action for recovery of Environmental Compensation due to damage caused to environment.*

b. *Considering complexity of study components and required expertise in related field / discipline, estimation of environmental damage and cost of remediation be worked out by a consortium of reputed institutions namely National Institute of Hydrology (NIH), Roorkee, National Geophysical Research Institute (NGRI),Hyderabad; National Institute of Occupational Health (NIOH), Ahmedabad; National Botanical Research Institute (NBRI), Lucknow and Indian Institute of Toxicology Research (IITR), Lucknow or such other institutions*

of repute. U.P. Pollution Control Board and M.P. Pollution Control Board may be nodal agencies for execution of the above activities in their respective jurisdiction.

c. *Irrigation Department in U.P. State is required to come out with status of silting in the reservoir impacting adversely on the water holding capacity of the reservoir and possible threat (if any) on the structure of the Rihand dam as the latter was designed to hold water column and is expected to practically holding a significant column of silt due to discharge of industrial effluents.*

d. *Environmental carrying capacity in Singrauli area must be worked out to take a decision on new / expansion projects and also to devise an environment friendly strategy on pollution control by the industries in the area."*

27. In O.A. No. 164/2019, with reference to breach of fly ash dyke of ESSAR Thermal Power Plant and NTPC, Vindhya Nagar at Singruali, M.P., the Committee appointed by this Tribunal headed by Justice Rajes Kumar, former Judge of Allahabad High Court, in its report dated 03.11.2019 observed:-

> **"***(2) By persuasion and monitoring, the Fly Ash disposal by the Thermal Power Plants has been increased but 100% disposal could not be achieved. Disposal of stocked Fly Ash has not yet been started. An exclusive meeting of the Thermal Power Plants has been held on 22nd October, 2019. The meeting was very successful. Some positive suggestions have come out to deal with the Fly Ash. Copy of the Minutes has already been sent by email. It is stated that the Fly Ash is the main cause of the air pollution in the Singrauli-Sonbhadra area. Since the installation of the Thermal Power Plant(s) from the year 1981 onwards, no sincere effort was made by the Thermal Power Plants for the disposal of Fly Ash. It is only because of the sincere effort made by the Committee and regular monitoring, the Thermal Power Plants have started taking steps for disposal of Fly Ash.*
>
> *(3)* ***Construction of the Fly Ash Dyke and its maintenance was not found technically sound and proper. Recently, two Fly Ash Dykes – one of ESSAR Thermal Power Plant and another of NTPC, Vindhyanagar were***

breached, causing heavy environmental damages. The Committee has taken serious note about this happening and has given direction to all Thermal Power Plants to get the certificate of the third party expert about the construction and stability of the Fly Ash Dyeke. The Committee is seriously monitoring.

(4) Since long, the industrial effluents have been drained in the Rihand Reservoir. The Fly the Fly Ash has also been drained by some of the Thermal Power Plants, Ash travelled to the Rihand Reservoir, polluting the water of the Rihand Reservoir, which is only source of water. The committee has taken a very serious note of this issue and directed the U.P. Pollution Control Board to prepare a DPR for de-silting of sludge in order to purify the water and to increase the capacity of the Rihand Reservoir which has been substantially reduced due to drainage of affluents and fly ash.

(8) Shri Ashwani Kumar Dubey has filed one Application seeking the various reliefs on account of the environmental damages being cause by the breach of Fly Ash Dyke of ESSAR Thermal Power Plant. The enquiry in pursuance thereof is going on. Shri Ashwani Kumar Dubey has also filed a second Application seeking various reliefs on account of the breach of the Fly Ash Dyke of NTPC Vindhyanagar causing environmental damages. The enquiry in this regard is going on and is pending."

28. While the above report is yet to be considered, the matter was examine on 05.11.2019 with reference to an earlier report as follows:-

"Generation and storage of Fly-ash in Thermal Power Plants is becoming a great cause of concern affecting the environment. Due to the regular storage of Fly-ash in Fly-ash Dykes since long, affecting air pollution, has led the Ministry of Environment, Forest and Climate Change, Government of India to declare the Sonbhadra and Singrauli area as a most critically polluted area. No proper roadmap has been presented for its proper disposal by the Thermal Power Plants.

It has been noticed that in recent times there had been breach of Ash Dykes of two Thermal Power Plants in Singrauli district of Madhya Pradesh, which has resulted in discharge of Ash slurry to the river as well as to Rihand Reservoir adversely affecting their water quality. These Ash Dyke pertains to Thermal Power Plants (TPPs) namely Mjs Essar Power Ltd and NTPC,Vindhya Nagar. *These incidence are of serious concern and indicates improper and non scientific design of Ash Dykes. The Oversight Committee constituted by Hon'ble NGT has taken this matter very seriously and also discussed in the previous meeting. In this regard a meeting of the Committee is convened on October 22, 2019 at 11:00 AM in Circuit House at*

Prayagraj to discuss various issues related to handling of Ash and their disposal. The agenda of the meeting is as below: -

All Thermal Power Plants have to talk about the structural design of their Ash Dykes to prove that their Ash Dykes are proper and scientifically designed.

1. *To discuss with all the Thermal Power Plants about structural details of their Ash Dykes and their adequacy for handling of Fly Ash generated. Whether submitted the details of ash dykes to SPCBs and taken permissions from SPCBs.*

2. *All Thermal Power Plants have to talk about the structural design of their Ash Dykes to prove that their Ash Dykes are proper and scientifically designed.*

   Submission of affidavit by TPPs in compliance of decisions taken in the last meeting of Committee regarding adequacy of Fly Ash Dyke. The status will also be shared about the action taken by TPPs for third party assessment of Ash Dyke of their plants through expert institutions like NEERVIITs.

3. *Thermal Power Plants may submit their roadmap for the future disposal of the stored Fly-Ash as well as the currently generated Fly-Ash.*

4. *What effort has been made to fill up the Fly-Ash in the abandoned Coal Mines and Stone Mines? Whether any letter has been written to the Mine-owners or to the concerned Authority in this regard, seeking permission in light of the discussion in the earlier meeting(s)?*

5. *To provide opinion about option of developing mounts of Ash Dyke as done by NTPC Thermal Power Plant, Dadri, where green cover has been developed by covering it with the top soil.*

6. *Submission of status by NTPC Vindhya Nagar about necessary clearance from Madhya Pradesh Pollution Control Board about Gorbi mines and disposal of Fly Ash.*

7. *Preparation of DPR for project of desilting the Rihand Reservoir and bearing of such expenditure by Thermal Power Plants of the area on polluter pay principle.*

All the Thermal Power Plants situated in the State of U.P. and M.P., Members of the Committee, District Magistrate of concerned districts may be informed to attend the meeting with relevant information as per Agenda."

"8. The deliberations of the Committee have been summed up as under:

"Thermal Power Plants — Ash Utilization:

NTPC-Vindhyanagar**: Shri V.K. Maurya, Deputy General Manager (Civil_Design) NTPC, New Delhi along with Shri Debashis Sen, Executive Director (Vindhyanagar) states that they could not comply the direction given by the Committee in the earlier meeting and could not submit the affidavit till today. They could not file any reply to the points raised in the Agenda of notice. However, Shri V.K. Maurya tried to explain that their Fly Ash Dyke was constructed in accordance to the norms and time to time, when the height of the Dyke was raised, the technical advices were also taken from the experts. However, no evidence in this regard has been produced before us. Despite asking from us that whether they have brought any reply to the points detailed in the agenda, Mr. Jain another officer states that they have everything. The periodical inspection has been made by the various internal department officers but he admitted that no assessment or report by third party agency has been obtained with regard to Fly Ash Dyke. **Prima facie, the Committee is off the view that the officers of the NTPC are still not serious.** They have not complied with the direction given by the Committee in the earlier meeting. The affidavit has not been filed. **Recently, we came to know that there was a breach of Fly Ash Dyke on 06.10.2019 due to which huge quantity of fly ash slurry travelled alongwith the ground causing damage to crops and the fly ash travelled up to the Rihand Reservoir.** If as per the version of Mr. Jain and Mr. Maurya everything was perfectly all right and time to time dykes have been checked why this incident happened. The incident itself shows that there was some deficiency in the construction of Fly Ash Dyke. The whole purpose for asking the affidavit in the earlier meeting was to get their dykes checked properly from the third party experts inasmuch as these dykes were originally constructed much earlier, in the present case in the year 1981. **Plant is not able to produce any roadmap for the disposal of the stocked Fly Ash and the currently generated Fly Ash. A continuous process of stocking the Fly Ash is going on, which is causing environmental effect every day. In this view of the matter, the Committee is of the view that the Plant is liable for the compensation/penalty for causing environmental damage every day.

*Later on, at the end, they have provided an affidavit. **The averments made in the affidavit are vague and casual. The paragraphs are sworn on the 'personal knowledge' and not on the basis of documents. We***

are not satisfied with the averments made in the affidavit. *Sri Jain submitted that some time may be allowed to get the Fly Ash Dyke inspected by the third party agencies. He prays and is allowed one month time to get the Fly Ash Dyke inspected by the third party agencies like IIT or any other agencies, who are experts on the subject. He further submitted that he may be allowed a week's time thereafter to give the reply of each and every point of the agenda of the meeting.*

NTPC Shaktinagar*: Shri Debashish Chattopadhyay, Chief General Manager submitted an affidavit in respect of the Fly Ash Dyke. From perusal of the affidavit it appears that the averments are vague and general in nature. The averments are sworn on the basis of personal knowledge and not on the basis of the documents. The Committee is not satisfied with the affidavit. Let the Plant may file a fresh affidavit after getting the report from the third party technical agency. He further submitted that due to the breach of the Fly Ash Dyke of NTPC Vindhyanagar and on account of the heavy pressure, their recycled water pipeline has been damaged resulting overflow of the water from the Dyke.* ***He fairly admitted that some quantity of the over-flown water is going to Rihand Reservoir.*** *He, however, assured that within a week the recycled water pipeline will be repaired and they may also get the technical structural stability report about their Fly Ash Dyke from third party agencies namely IIT etc. He submitted that he will submit the Affidavit within a period of one month giving reply of each and every point raised in the agenda.*

NTPC Rihand*: Shri Ranjan Kumar, G.M. NTPC Rihand submitted an affidavit. The averments made in the affidavit are vague and casual. The paragraphs are sworn on the 'personal knowledge' and not on the basis of documents.* ***We are not satisfied with the averments made in the affidavit****. He states that their Plant has already engaged IIT, Kanpur for the inspection and report in respect of the Fly Ash Dykes. The report may likely be obtained within one month.* ***The Committee is of the view that let one opportunity may be given to the Plant to file a better affidavit along with the documents to demonstrate the action taken by the Plant in this regard and also the report of the third party agency in regard to the structural stability of the Fly Ash Dykes.***

Lanco Anpara & U.P. State Power Corporation Ltd.*: An affidavit has been submitted by the Anpara Thermal Project, a Unit of U.P. State Power Corporation Ltd. The affidavit is vague and general in nature. In support of the averments in the affidavit, no document has been annexed. There is no report of the third party technical*

agency. They are directed to give a better and detailed affidavit. It is stated that they have only one Fly Ash Dyke in which their fly ash as well as the fly ash of Lanco are being drained. The maintenance of the said Fly Ash Dyke is the responsibility of the Anpara Thermal Project, U.P. State Power Corporation Ltd. In this way, so far as the construction, stability and maintenance of the Fly Ash Dyke is concerned, Lanco is not responsible. The entire responsibility is upon U.P. State Power Corporation Ltd. The officer of U.P. State Power Corporation Ltd. submitted a report of 2018 wherein the structural stability of the Fly Ash Dyke has been examined. In the said report, it is approved that their Fly Ash Dyke is suitable for further raising of height up to 5 meters. The copy of the said report has been submitted before us. The Committee is of the view that after raising the height, the Plant may get a further report in respect of structural stability in order to overrule any possibility of technical flaw. Shri A.K. Rai, Executive Engineer states that in the Fly Ash Dyke the rainy water of the catchment area also flows and in such a situation during the rainy season when the Fly Ash Dyke is full of water due to heavy rainfall etc. ***Sometimes the fly ash along with the water also flows to Rihand Reservoir. The Management of the Plant is very serious about this issue and has asked the District Administration to divert the Nala of the catchment area to somewhere to avoid any flow of fly ash in the Rihand Reservoir.*** *The District Magistrate, Sonbhadra states that the Administration is very serious and taking all possible steps to get the Nala diverted. The work is likely to be completed within two months. Both Lanco and U.P. State Power Corporation Ltd. are directed to furnish their reply by filing a fresh affidavit in regard to each and every point of the agenda of the meeting.*

Essar Power*: The officers of the Company submitted the affidavit regarding their Fly Ash Dykes. They submitted that 80% of the fly ash which had flown due to the breach of the Fly Ash Dyke have been removed and 20% fly ash lying on the earth shall be removed within a period of one month. They submitted that for the assessment of the environmental damage they have engaged NEERI, Nagpur. The document relating to their engagement has been produced before the Committee. They stated that NEERI has asked for six months time to assess the environmental damage. They further submitted that for the structural stability of the Dyke and making it technically sound they have taken the advices from two professors of the IIT Roorkee, namely, Prof. K.S. Hariprasad and Prof. Narendra K. Samadhia. They have visited the spot. They are likely to give their report within a period of fifteen days. On the basis of their report, they may proceed to reconstruct their Fly Ash Dyke. It has also*

been informed to the Committee that there was a joint inspection done by the officers of the Central Pollution Control Board and the officers of the M.P. Pollution Control Board and on the inspection the report has been submitted wherein they found that the Plant has removed 80% fly ash and they are in the process of removing the remaining 20% of the fly ash. ***The Committee directs the Plant to submit the report of the IIT within fifteen days and thereafter also submit the progress report, of the steps being taken to reconstruct the Dyke. On the report being received from NEERI, the environmental compensation shall be assessed. Let the Company may give detailed reply of each and every point of the agenda of the meeting by filing an affidavit within one month.***

Shasan Power Ltd.*: The representative of the Plant submitted the affidavit.* ***However, the report of the third party agency certifying the structural stability of the Fly Ash Dykes has not been submitted. They have also not submitted the reply of each and every point raised in the agenda. The representative states that they will get the report about the structural stability of the Fly Ash Dykes and give the reply of each and every point raised in the agenda within one month.***

Hindalco Industries — Mahan Aluminum Project*: The Company is engaged in the manufacturing of Aluminum from Alumina and has a Power Plant of 900 MW capacity. It is submitted that they have 02 Fly Ash Dykes, one dyke has been completely filled to the capacity and the other is being used now. For the purposes of raising height of the Fly Ash Dykes they have engaged the BHU for technical advice and on the basis of the advice they will proceed further in the matter.* ***The Committee is of the view that they may also get the report from the third party agency about the initial structural stability of the two Fly Ash Dykes****. The Company has submitted an affidavit. The averments in the affidavit are general in nature. They are also directed to file a fresh affidavit giving reply of each and every point raised in the agenda within one month.*

Bajaj Energy*: The representative of the Plant stated that they have received copy of the agenda very late. Therefore, they could not collect the necessary documents. They sought time to furnish the details****. Let the Plant may submit an affidavit relating to the structural stability of the Fly Ash Dykes and also give the reply of each and every point raised in the agenda, supported by the certificate from third party agency in this regard.*** *They are directed to give the reply of each*

and every point of the agenda within a period of one month.

***M.P. Power Generating Co. Ltd.**: There are 04 (four) Units of this Company, namely:-*

(1) ATPS, Chachai, District Anuppur, established in 2007.
(2) SGTPS, Birsinghpur, District Umariya, established in 2015.
(3) STPS, Sarni, District Betul — two Plants established in 2013 and 2017.
(4) SSTPP, Dongalia, District Khandwa, established in 2018.

A consolidated Paper Book has been submitted in respect of all the Units. However, they have not submitted any Affidavit with regard to the Fly Ash Dykes and also the Certificate of the third party agency who are the Technical expert. The officers of the Company pray for one month time to submit the affidavit and the certificate. They have also submitted a roadmap for the disposal of the Fly Ash. A perusal of the roadmap reveals that in comparison to the other Power Plants, their Unit-wise disposal are quite satisfactory.

***However, they admit that even after more than 90% disposal, the stock of Fly Ash still remains and they are making efforts to dispose it by negotiating with the Cement Plants and approaching the Government for permission to fill the Fly Ash in the abandoned Mines**. It is submitted that they are hopeful to achieve the target shortly. Let the Company may file the affidavit and the certificate in respect of the structural stability of the Fly Ash Dykes within one month.*

***MB Power (Madhya Pradesh) Ltd.**: The Company has submitted a presentation in the form of small paper book. However, they have not submitted any Affidavit with regard to the Fly Ash Dykes and also the Certificate of the third party agency who are Technical expert. The officers of the Company pray for one month time to submit the affidavit and the certificate. The representative of the Company states that their disposal of Fly Ash is at present more than 100% and there is very little stock of Fly Ash lying in the Plant. For the further disposal of Fly Ash, they have approached the Southern Coalfields Ltd., Bilaspur to provide abandoned Mines for the purposes of filling of the Fly Ash. He stated that they are continuously approaching the Southern Coalfields Ltd., Bilaspur but they are not giving any reply. A copy of the letter has also been given to the Ministry of Coal, Govt. of India and also*

to the Madhya Pradesh Pollution Control Board. Sri Hemant Sharma, Director, MPPCL states that he will look into the matter and do the needful The Committee further directs the Southern Coalfields Ltd., Bilaspur to look into the request of the Plant and if it is feasible and there is no impediment, they may allow the filling of their Fly Ash in the abandoned Mines. Let the Company may file the affidavit and the certificate in respect of the structural stability of the Fly Ash Dykes within one month.

***Obra Thermal Power Plant, Obra**: The representative of the Plant submitted an affidavit in pursuance of the direction given by the Committee in the earlier meeting. We have perused the affidavit. The manner in which the affidavit has been submitted is not acceptable. It is, in fact, not an affidavit and nothing has been stated properly, supported by any document, as required by the Committee. Let the Company may file a fresh affidavit stating that their Fly Ash Dykes are structurally stable and there is no possibility of any breach, and also annexing the certificate in respect of the structural stability of the Fly Ash Dykes from a third party technical agency. The representative submitted that the Plant is raising the height of the Fly Ash Dykes after taking the advice from the IIT Roorkee. Committee directs that after the completion of the work, they will further get their Dykes inspected by the third party technical agency, namely, NEERI to get the certificate that the Dyke is fully structurally stable and there is no possibility of any breach. He submitted that although, at present, the Fly Ash Dykes is not operational but the Plant has negotiated with the NHAI and also got allotment of abandoned mines from the concerned Authorities. After getting the N.O.C. from the Department, they will fill the Fly Ash in the abandoned mines. In this way, they will be able to dispose off sufficient quantity of the Fly Ash. Let the Company may file a fresh affidavit, supported by documents, stating their Fly Ash Dykes are structurally stable and technically sound and also submit reply of the issues raised in the agenda within one month.*

***Prayagraj Thermal Power Plant**: The representative states that although they have two Fly Ash Dykes but since their disposal of Fly Ash is at present 100%, there is no occasion to store the Fly Ash. The Plant is not facing any problem with regard to the Fly Ash Dyke. The Plant is, however, not operating in full capacity due to lack of coal in adequate quantity. Since their disposal of Fly Ash is to the nearby Industries, there may not be much problem of storage of fly ash in the Dykes.*

***Jaypee Bina Thermal Power Plant**: The representative of the Company filed an affidavit. We have perused the affidavit. Let the Company may file a fresh affidavit*

within one month enclosing the certificate from the third party technical agency that their Fly Ash Dykes are structurally stable and there is no possibility of any breach. They may also submit the reply to each and every point of the agenda in the said affidavit.

***Jaypee Nigrie Thermal Power Plant**: The representative of the Company states that there is 100% disposal of the Fly Ash. There is no stock of Fly ash in the Dykes. Only bottom ash is filled in the Fly Ash Dykes. At present, there may be about 3.9 Lac MT bottom ash in the dykes. He stated that they have sought permission from the concerned Authority to fill up the old lying Ash for filling up in 04 abandoned Stone mines, which are also leased out to them for the quarry of stone. The total capacity of the mines is about 15 lac MT. On the permission being granted, they will be able to consume the entire stock of the bottom fly ash stored in the Fly Ash Dykes. Let the Company may file a fresh affidavit within one month enclosing the certificate from the third party technical agency that their Fly Ash Dykes are structurally stable and there is no possibility of any breach. They may also submit the reply to each and every point of the agenda in the said affidavit.*

***NTPC Meja** : The representative of the Plant stated that their Plant has been commissioned in the year 2019. After commissioning of the Plant, the production of the Plant has not been properly carried on initially, for the shortage of the coal and at present due to technical fault. The production may likely to start very soon. Therefore, they are not facing any problem relating to the Fly Ash.*

***NTPC Dadri** : The representative of the Plant states that there is no Fly Ash Dyke in their Plant. In the Plant premises, they have developed a huge Fly Ash Mount wherein they are directly sending dried fly ash from the Plant to the Fly Ash Mount through the pipeline. The permissible height of the Fly Ash Mount is 55 Meters. The Fly Ash Mount is full of trees which works as a binding of fly ash and avoids any damage during the rainy season. The creation of the Fly Ash Mount is a continuous process. There is no effect of Fly Ash effluents and affecting any air pollution and environment. On the contrary, due to heavy growth of plantation, which is about 2,00,000, over the Fly Ash Mount, the entire area is full of greenery and creates a better environment."*

"9. In view of above, the Committee observed that the fly ash could be managed by developing a fly ash mount. The Committee has made following recommendations:

"(1) All the Thermal Power Plants are directed to get their Fly Ash Dykes inspected by the third party agencies who are Technical expert to certify that their Fly Ash Dykes are technically sound and structurally sustainable and file an affidavit in this regard along with the certificate of the third party agencies.

(2) All the Thermal Power Plants may make a serious effort for 100% disposal of the currently generated Fly Ash and also for the disposal of the stocked Fly Ash.

(3) All the Thermal Power Plants may approach the District Administration with the request to allot abandoned mines (stone and coal) to them for the permission to fill the Flay Ash.

(4) Generation of Fly ash is a continuous process in all the Thermal Power Plants which is causing pollution of every day - Why the environment compensation on per day basis or month-to-month basis may not be imposed and recovered for the continuous pollution of air and water?

(5) There are number of Acts relating to air pollution and water pollution. The concerned authorities are directed to initiate the civil and criminal proceedings against these Thermal Power Plants who are causing air pollution and water pollution every day.

(6) U.P. Pollution Control Board under whose jurisdiction the Rihand Reservoir comes is directed to prepare a D.P.R. for de-silting of Rihand Reservoir for its restoration to its original form.

(7) All the Thermal Power Plants are being cautioned to take the necessary steps, as directed above, failing which they will be subject to the penalty/environment compensation."

10. *We are of the view that the recommendations on the subject of development of fly ash mounts and filling up of abandoned mines are issues which need to be examined by experts with regard to the safeguards necessary in the process, after studying the impact of environment. It is only after such a study that the development of mounts and filling up of abandoned mines can be undertaken. If there are pre-existing guidelines of MoEF&CC/CPCB on the subject, the same may be followed.*

11. ***As regards desilting of Rihand reservoir, the same needs to be undertaken on scientific basis and cost recovered in the manner apportioned by CPCB. Apart from desilting, structural improvement of the dykes needs to be simultaneously taken up. CPCB may ensure***

that an action plan is prepared by the power plants whose dykes have breached. The issue of developing fly ash mounts and filling up of abandoned mines may also be got examined by the CPCB from its Expert Committee.

12. ***The CPCB has given report dated 26.09.2019 in response to order dated 19.07.2019. The CPCB has recommended payment of compensation of Rs. 155,42,85,300/- (One hundred fifty five crore forty lac eighty five thousand three hundred). Since it is pointed out that vide order dated 04.11.2019 the Hon'ble Supreme Court has directed deferment of the proceedings, we defer the proceedings till the matter is decided by the Hon'ble Supreme Court."***

In view of above, while the matter has to be taken seriously and directions are necessary to be issued, the present order will be subject to any proceedings pending before the Hon'ble Supreme Court and where there is stay in operation, this order will not operate till such stay continues and thereafter abide by orders of Hon'ble Supreme Court.

29. This Tribunal has to enforce the mandate Section 20 of the NGT Act and require compliance of principle of Sustainable Development, Precautionary and Polluter Pays principles.

30. We have considered the written submissions filed by the individual TPPs. In view of earlier orders dealing with the contentions of the TPPs, there is no merit in the stand that the said plants are not liable for 100% fly ash disposal. Difficulties pointed out are of no relevance as the same are to be resolved by the administration and not by the victims of pollution whose rights are being affected. Environment cannot be violated against statutory norms. Violation of statutory notifications needs to be visited sternly in terms of enforcing the same, recovering compensation and prosecuting the violators.

Whatever be the individual circumstances, it cannot be a ground to disobey law and to commit criminal offence under the Water Act, Air Act and EP Act. There is no discretion available with this Tribunal to dispense with the mandate of law. Statutory provisions are binding on every TPP without any exception. It is, thus, not necessary to go into the justification or otherwise of such impermissible defence of the TPPs.

31. In view of above, all TPPs must take prompt measures for disposal of both current and accumulated fly ash. In respect of non-compliant TPPs, Polluter Pays principle has to be applied from the cut-off date of 31.12.2017, apart from other statutory consequences for continued violations.

32. Thus, our directions are as follows:-

a. The TPPs may take prompt steps for scientific disposal of fly ash in accordance with the statutory notification issued by the MoEF&CC under the provisions of EP Act requiring 100% utilization and disposal of fly ash.

b. For the non-compliant TPPs, environmental compensation needs to be determined w.e.f. the cut-off date of 31.12.2017 as stipulated in the Notification dated 27.01.2016.

c. CPCB may accordingly compute and levy Environmental Compensation in accordance with the formula referred to above w.r.t. individual TPPs in accordance with law and

submit compliance report to this Tribunal before the next date.

d. CPCB Guidelines of May 2019 for Utilization/Disposal of Fly ash for Reclamation of Low Lying Areas and in Stowing/Back filling of Abandoned Mines/Quarries may be complied.

e. Task Force of Ministry of Power and Ministry of Coal may recommend list of abandoned mines/quarries for mine back filling purposes to the CPCB. CPCB may notify the same accordingly for use by the TPPs as per applicable guidelines and permission from State PCBs/PCCs.

f. A Committee comprising of CPCB and IIT Roorkee may assess the environmental damage with regard to the breach sites at Vidhyanchal TPP an Essar TPP in Singrauli area and submit its recommendation within three months. CPCB shall be at liberty to engage any other technical expert for this purpose.

g. The Committee comprising of Collector, CPCB and Member Secretary of MP State Pollution Control Board may assess the damage with regard to the breach sites at Vidhyanchal TPP and Essar TPP in Singrauli area to the crop and agricultural productivity and ensure effective restoration/remediation of affective sites within three months.

h. CPCB may ensure implementation of action plans approved by it in accordance with timeline as provided in the statute.

i. A joint Committee comprising of MoEF&CC, CPCB, IIT Roorkee and any other member considered necessary may submit quarterly progress report on recommendations of Expert Committee of Niti Aayog for enhanced utilization of fly ash in various sectors: mines, roads, cement, industries and bricks etc., along with its implementation status.

j. The present order is subject to proceedings pending before the Hon'ble Supreme Court and where stay is operative, this order will not operate till stay continues and thereafter abide by orders of Hon'ble Supreme Court.

Copy of this order may be conveyed to MoEF&CC, Ministry of Power, Ministry of Coal, CPCB, IIT Roorkee and MP State Pollution Control Board. CPCB may put the order on its website and communicate the same to all concerned TPPs.

List for further consideration on 08.07.2020.

Adarsh Kumar Goel, CP

S.P Wangdi, JM

Dr. Nagin Nanda, EM

February 12, 2020
O.A. No. 117/2014 & other connected matters
A

Guidelines for disposal/utilisation of Fly Ash for reclamation of Low Lying Areas and in stowing of Abandoned mines/Quarries

Central Pollution Control Board
March, 2019

I N D E X

2. Guidelines for Low Lying area development using Ash, ash Policy 2015, NTPC Ltd.
3. Permission of DGMS to M/s JSPL & JPL for disposing ash in coal mines

Guidelines for disposal/utilisation of flyash for reclamation of Low Lying Areas and in stowing of Abandoned mines/Quarries

1.0 Introduction:

Management of huge quantity of ash (fly ash, bottom ash and pond ash) generated from coal fired Thermal Power Plants (TPPs) is a serious environmental challenge. Ash generation from coal or lignite based thermal power plants, has increased from 40 Million tonne per year in 1993-94, to more than 200 Million tonne per year in 2017-18 and is projected to increase to 275 Million Tons / year by 2032.

The ash generation in coal and lignite based thermal power plants in various forms such as dry ash, bottom ash, pond ash and mound ash that are required to be managed in such a manner that it does not affect the environment. Utilisation of ash for reclamation of low lying areas and abandoned quarries is recognised as an alternate option and therefore, MoEF&CC has issued a notification to address utilisation off ash for various purposes including these two options

The Ministry of Environment, Forest and Climate Change (MoEF&CC) issued the Fly Ash notification on 14th September, 1999, which has subsequently been amended in 2003, 2009 and 2016. The Fly Ash notification (1999) mandates the use of fly ash for the purpose of manufacturing ash-based products such as cement, concrete blocks, bricks, panels or any other material and for construction of roads, embankments, dams or for any other construction activity within a radius of 300 km from thermal power stations (TPPs). Besides, it also mandates use of fly ash in mines backfilling or stowing of mines within a distance of 50 km.

2.0 Status of fly ash utilisation:

Since 1999 when flyash utilisation was made mandatory, the utilization of fly ash has increased from 6.64 million-ton in 1996-97 to 147.7 million-ton in 2017-18. Fly ash generation and utilization in 2017-18 from 182 coal/lignite based TPPs of various power utilities in the country was 220.7 and 147.7 million-ton, respectively. The percentage of fly ash utilization during 2017-18 has been 66.9%. During 2017-18, out of total fly ash generation, 35.6 % of total fly ash was used in the cement sector, followed by 14.28 % in making bricks & tiles, 11.57 % stored in ash dyke raising,

7.99% in mine filling, 16.85 % in reclamation of low lying area, 5.43 % in roads & embankments, 1.34% in concrete making, 0.21 % in agriculture, 6.73 % in others and 33.1% remained as unutilized fly ash.

Mine reclamation represents a potential beneficial use of flyash that has been receiving increased attention in recent years. Coal mining operations have produced both open pits and deep underground mine voids that can be filled by flyash. Placement of flyash into deep mines can provide structural support to abate subsidence, and placement of flyash in surface mines or other open pits can aid in restoring mined land to beneficial use. The use of flyash as mine backfill may provide the additional benefit of limiting impacts of acid mine drainage (AMD). Mostly flyashe is alkaline material that can neutralize acidic water and/or inhibit production of acid. Placement of fly ash may also reduce the permeability of mine strata and divert water away from acid-generating materials. Although flyash possess these beneficial physical and chemical properties, there are concerns regarding potential for release of toxic chemicals in the leachates from the fly ash. Therefore, scientifically sound fly ash management is needed so that environmental concerns can be adequately and reliably identified and addressed.

3.0 Need of Guidelines:

Ministry of Environment and Forests and Climate Change (MoEF&CC) vide Notification No. S.O. 763 (E) dated 14th September 1999, last amended on 25th January, 2016 issued following directions for reclamation low lying area and stowing of mines;

i. No agency, person or organization shall within a radius of three hundred Kilometres of a coal or lignite based thermal power plant undertake or approve or allow reclamation and compaction of low-lying areas with soil; only ash shall be used for compaction and reclamation.

ii. Soil required for top or side covers of embankments of roads or flyovers shall be excavated from the embankment site and if it is not possible to do so, only the minimum quantity of soil required for the purpose shall be excavated from soil borrow area. In either case, the topsoil should be kept or stored separately. Voids created at soil borrow area shall be filled up with fly ash with proper compaction and covered with topsoil kept separately as above and this would be done as an integral part of embankment project.

iii. 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).

iv. No person or agency shall within fifty kilometers (by road) from coal or lignite based Thermal Power Plants, undertake or approve external dump of mining Over Burden (OB) without using at least 25 % of 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);

v. All agencies undertaking construction of roads of flyover 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 Department and other State Government Agencies, shall within a period of four months from the publication of this Notification " 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".

vi. The pond ash should be made available free of any charge as is as where basis to manufacturers of bricks, blocks, tiles including clay flyash bricks production manufacturer's units, farmers, central and the state road construction agencies, Public Works Department and to agencies engaged in backfilling or stowing of mines.

Though, flyash utilisation has gained momentum progressively over the years, further efforts are required to explore new areas of ash utilisation. With suitable safeguards, mine backfilling including disposal of flyash in abandoned quarries and road construction specially in the construction of National Highways and Expressways could be the major mode of flyash utilisation in the near future as these areas have vast potential. It would perhaps be desirable that the concerned Ministries should take steps in sorting out the bottlenecks such as declaring a list of abandoned mines, making adequate provisions in respective schedules for flyash utilisation by the Indian Road Congress & construction agencies etc.

MoEF & CC vide letter dated 01.03.2019 asked CPCB to come out with guidelines based on Odisha Pollution Control Board experience for reclamation of low lying areas and abandoned quarries with ash as recommended by the Expert Committee that was constituted by Niti Aayog vide O.M. No. 25 (11)/2014-Minerals dated 12.06.2018 for developing a focus strategy for best utilisation of fly ash to manufacture end products recommended.

The scope of guidelines covers transportation and disposal of flaysh in low lying areas and abandoned quarries in an environmentally friendly manner.

4.0 Loading/unloading and transportation of flyash

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

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

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

I. Dry Pneumatic conveying
II. Dry (moist) Conveying system through belt conveyor/tube belt conveyor
III. High concentration slurry disposal system
IV. Medium concentration slurry disposal system
V. Lean concentration slurry disposal system

Amongst the above technologies, Dry Pneumatic conveying, Medium concentration slurry disposal system, High concentration slurry disposal system, and Dry (moist) Conveying system through belt conveyor/tube belt conveyor are preferable as compared to Lean concentration slurry disposal system.

The dry ash is typically conveyed pneumatically from the ESP or filter fabric hoppers to storage silos where it is kept dry, pending utilization or further processing, or to a system where the dry ash is mixed with water and conveyed (sluiced) to an on-site storage pond. Fly ash is stored in silos, domes and other bulk storage facilities. Fly ash can be transferred using air

slides, bucket conveyors and screw conveyors, or it can be pneumatically conveyed through pipelines under positive or negative pressure conditions.

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

The dry bottom ash removal and its transportation is certainly more environment friendly, compared to that of wet ash removal and transport system.

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

The power plants need to maximise dry collection of fly ash & bottom ash and also adopt adequate measures to prevent fugitive dust emission during loading, unloading, storage, transportation and various uses of dry as well as ash bottom ash and pond ash. Following guidelines are, therefore, suggested for prevention of pollution and augmentation of flyash utilisation

4.2.1 Maximise dry collection of fly ash and bottom ash

a. Coarse fly ash from first field of ESP hoppers need to be collected and stored separately.

b. Fine fly ash from second field onwards of ESP Hoppers should be collected separately. For some specific usage, fine fly ash may be passed through Classifier for further separation of fine fly ash and stored in separate silo.

c. Bottom ash which is not utilised presently could also be collected in dry form and converted into a valuable resource if processed to match the end use specification. Wet collection & disposal of bottom ash should be minimised as far as possible

4.2.2 Loading, Unloading and Storage

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

a. Current practice of loading of fly ash in Bulkers/Tankers requires improvement at the stage of loading of fly ash in Tankers. The opening of telescopic chutes at the loading end should be air tight and confined to avoid fugitive dust emission.

b. The Pollution Control Equipment / Cascade Filters, attached with fly ash loading chute should be periodically cleaned along with regular scheduled maintenance of bag filter to avoid choking and malfunctioning of Bag Filter. It would mitigate the dust emission during loading of fly ash.

c. Malfunctioning of level sensors can be avoided, with regular maintenance, to prevent over filling of fly ash in Tankers .

d. The Weigh Bridge to be installed under fly ash loading chute to fill just the required quantity of fly ash in tankers so that overflow/spillage of fly ash in open areas is avoided which otherwise results in heavy fugitive emission all around.

e. Opening of tankers need to be properly locked during transportation of fly ash. Automatic opening / closing system need to be installed without fail.

f. Current practice of unloading of fly ash from tanker to storage hopper through pneumatic system is fairly good. Otherwise, the leakage of fly ash will occur at bends and joints of transportation pipe line. The fly ash being abrasive in nature causes damage at bends and joint locations. Fly ash should, therefore be transported through PVC coated pipes to avoid abrasion otherwise it may lead to leakage of flyash. The mechanical unloading system should be envisaged to avoid high pressure and dust leakage from unloading pipe lines. As far as possible, number of bends should be minimised.

g. The fly ash storage silo should be of or coated with anti-abrasive or anti-corrosive material. It is better to provide concrete silo/hopper to avoid leakages.

h. Proper functioning of all the level sensor of Storage Hopper to be ensured to avoid any possible spillage from Hopper opening.

i. The Bag Filter made of anti-abrasive material/cloth be provided with telescopic chute.

j. Dumping of ash in Ash pond should be done mechanically in moist condition so that ash does not get air borne and pose fugitive dust problem.

k. The bottom ash discharged from boiler bed, may be transported pneumatically in dry form / in slurry form to the ash pond

4.2.3 Transportation

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

a. Transportation for abandoned mine back filling

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

b. Transportation for filling of low lying area

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

In no case, flyash or bottom ash shall be transported by open trucks / trollies irrespective of distance or end use. Thermal power plants and fly ash user agency shall collectively ensure that fly ash or bottom ash is transported in environmentally sound manner by following the guidelines mentioned in para 4.2.3 & 4.2.4.

4.2.4 General Code of Practices for Maintenance of roads, vehicles and conditioning of flyash

a. Roads inside power plant and that of flyash user agency should be paved and plantation of adequate width should be done at both sides. Mechanised road sweepers should be deployed. In addition, adequate arrangements for water sprinkling should be made to suppress fugitive dust emission, if any.

b. Thermal power plants and user agencies should make arrangements (two stages) for washing of wheels of the vehicles (bulkers/trucks) before deployed for fly ash ransportation.

c. Pond ash to be transported should be conditioned with water to maintain minimum of 15% moisture at the disposal point so that ash does not get air borne and cause fugitive emission.

d. Adequate free board in trucks should be kept to avoid overflow/spillage during transportation.

e. In case of any spillage enroute during transportation of fly ash, the agency shall ensure that spilled ash is collected and transported to the disposal/usage site immediately.

f. All the bulkers and trucks responsible for carrying fly ash should be with valid Pollution Under Control certificates.

g. Provision should be preferably made for weighing of fly ash loaded into tankers/ railway wagons/bulkers etc under the silo.

h. The speed limit of vehicles carrying flyash should be strictly enforced and it should not exceed 40 km per hour.

i. State Pollution Control Boards shall clearly indicate mode of transportation and method of loading and unloading while granting the consent.

j. Transportation of flyash through thickly populated areas should be avoided as far as possible.

k. General awareness/ training programmes be organised regularly for tanker operating staff like drivers and cleaners on the impact of hazards of fly ash.

5.0 Reclamation of Low Lying area using Ash

Filling of Low lying areas inside the plant premises and outside within 300 km. of power plant may be taken up using ash. Low lying area reclamation with ash should be taken up adopting standard practices as per 2015 technical specification mentioned in NTPC Policy. Following steps should be taken up prior to initiate low lying area developmental activities.

5.1 Preconditions:

5.1.1 **Consent from land owner:** Consent/ permission should be obtained in writing from the land owner before start of work.

5.1.2 **Permission from Regulatory authority:** Power plant/ land owner/ agency shall obtain statutory permission from regulatory authorities such as SPCB as per the requirement.

5.1.3 **Prevention of pollution:** Suitable methods should be adopted and necessary arrangement should be made to prevent pollution during excavation of pond ash at ash pond, filling area and during transportation of ash.

5.1.4 **Soil Cover on the top of ash fill:** As per the MOEF&CC gazette notification of ash utilization dated 14-09-1999 and as amendment on dated 27-08-2003 and 03-11-2009, the soil required for soil cover shall be excavated from land fill site itself and kept separately before taking for ash filling. If it is not possible to do so, only the minimum quantity of soil required for the purpose of cover shall be excavated from the soil borrow area. The voids so created due to removal of soil shall be filled up with ash with proper compaction and covered at top with soil cover. About 300-500 mm thick soil layer shall be placed over the ash fill area. This should be done as an integral part of low lying area development work.

5.1.6 **Restrictions :**

Reclamation of area by ash shall not be permitted in the following areas :

i. Flood plain area/Ecologically Sensitive Areas.
ii. Agriculture land / area.
iii. Reclamation of Forest land / area is permissible only if clearance from MoEF&CC as per Forest Conservation Act, 1980 is available.
iv. Gochar Kisan Land.

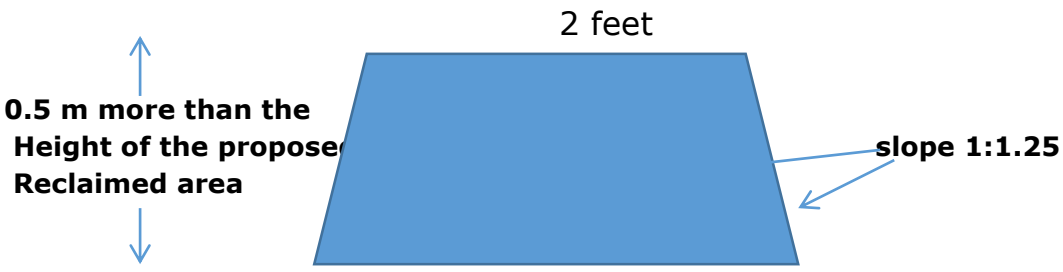
5.2 Preparation of filling area

5.2.1 The entire area meant to receive the ash and earth filling shall be stripped by minimum 150 mm. The exact depth of stripping shall be decided by the Engineer-in-Charge depending upon nature of top soil and the vegetation present. All organic matter, vegetation, roots, stumps, bushes, rubbish, swamp materials, etc. shall be removed from the site. The stripping material and other unsuitable materials as referred above shall be kept away from the area to be filled up so that these do not get mixed up with filling material and disposed off to a place as decided by the Engineer-in-Charge.

5.2.2 Levelling

All existing undulations, holes, cavities and excavations made for plate load rests and other soil investigations, etc. shall be filled with pond ash having requisite moisture content. The ash thus filled shall be compacted with the help of vibratory rollers so as to achieve dry density of not less 95% as per I.S–2720 (Part-VII). This would result in a levelled surface upon which layer wise filling of compacted ash can be done.

5.2.3 Protection of pond or water body adjoining or within the working site: If any pond or water body exists within or adjoining the low lying area /quarry then an earthen embankment of the cross-section as given in the Figure below be constructed around the pond or water body to protect it from
spilling of ash or ingress of surface runoff into it.



Cross- section of water body protection embankment

The soil used for the embankment should neither be granular nor black cotton soil. It should be of good quality for geo-technical application. Soil should be compacted to 95% proctor by Vibratory Roller of 15 T minimum capacity, in the layers of 25-30 cm and the optimum moisture content determined before execution of work. After attaining the desired height, the disposal area should be thoroughly compacted, graded followed by soil cover at least 15 cm thickness for proper reclamation of the land by grass turfing or appropriate plantation.

5.3 Excavation of pond ash from borrow area

5.3.1 Borrow Area-location

The location and permissible depth of excavation of the Borrow areas for pond ash shall be got specifically approved from concerned Thermal Power Station. The boundaries and permissible depth of excavation so approved shall be strictly followed and no deviation shall be allowed. Similarly, routes for movement of all ash transportation vehicles, water tankers, equipment, etc. shall be got approved from Thermal Power Station. These shall be strictly followed and no deviation shall be allowed.

The excavation surfaces and surface of waste materials shall be left in a reasonably smooth and even condition. All the excavations within the ash pond shall be at a minimum slope of 4 (Horizontal): 1(Vertical)

5.3.2 Site Clearance

All areas required for borrowing shall be cleared of all trees and stumps, roots, bushes, rubbish and other objectionable material. Particular care shall be taken to exclude all organic matter from the ash to be placed in the fill. The cleared areas shall be maintained free of vegetation growth during the progress of the work.

5.3.3 Stripping

Borrow area shall be stripped of top layer by a depth of minimum 150 mm. The exact depth of stripping shall be decided by the Engineer-in-charge depending upon nature of top layer and the vegetation present.

5.3.4 Borrow area watering & dewatering

The natural moisture content of material in the borrow areas as well as the optimum moisture corresponding to the Proctor's maximum dry density for the material in the particular borrow area shall be obtained from laboratory tests. Additional moisture, if required, shall be introduced into the borrow area by watering well in advance of excavation to ensure uniformity of moisture content. If in any borrow area before or during excavation there is excess moisture, steps shall be taken to reduce the moisture by the selective excavation to secure the materials of required moisture content by excavating drainage ditches, by all owing adequate time for drying or by other means. To avoid formation of pools in the borrow areas during excavation operations, drainage ditches from borrow areas to the nearest outlets shall be excavated so as to obtain homogeneous mix. In general, all materials from a particular borrow area shall be mixture of materials obtained for the full depth of cut.

5.3.5 Earth cover in Borrow Area

It shall be the responsibility of Thermal Power plant to arrange sweet soil from approved external borrows areas. The earth cover material shall consist of sandy loam free of admixture of stiff clay, refuse, stumps, roots, rock, bushes, weeds or any other material which would be detrimental to the proper development of vegetation growth. It shall not contain stone of size 25 mm and over . The loamy top soil shall be of healthy crops, grass or other plant growth, that is of good quality and reasonably free draining. Other specifications for Borrow area e.g. site clearance, stripping, Borrow area watering/De-watering etc. shall be as per relevant clauses of Borrow area for ash as outlined above i.e clause nos. 5.3.1 to 5.3.4.

5.4 Filling with pond ash

5.4.1 Placement

After the area has been prepared and levelled, pond ash excavated from Borrow areas having required moisture content shall be placed in layers not exceeding 300 mm in compacts thickness. The placing operations shall be such that in strips of 10-15 m of the material when compacted in the fill will be blended sufficiently to produce specified degree of compaction and stability. No stones, cobbles or rock fragments, having maximum dimensions more than 100 mm shall be placed in the fill. Stones and

cobbles shall be removed either at the borrow pit site before it is used as soil cover.

5.4.2 Procedure

The material shall be placed in the fill in continuous horizontal layers, stretching right across the whole section, not more than 300 mm in compacted thickness and rolled as herein specified. The length of one layer shall not exceed 150 meters at one stretch. The layers shall be compacted in strips overlapping not less than 600 mm, if the rolled surface of any fill is found to be too wet for proper compaction, it shall be raked up, allowed to dry, or shall be worked with a harrow or any other approved equipment to reduce the moisture content to the required amount and then it shall be re-compacted before the next layer of ash is placed. Ash surfaces are likely to become dry in short intervals especially during hot and dry weather and hence enough moisture shall be added between difference passes to ensure proper compaction

5.4.3 Compaction

The compaction of each layer shall be carried out so as to achieve maximum in–situ dry density 95% of maximum dry density (MDD) of the material found out as per I.S 2720 (Part VII). To achieve maximum compaction level use of vibratory rollers shall be made. Required number of passes shall be made so as to achieve desired compaction. Number of passes required shall be verified through trials tests before actual execution of work. The broad specifications of vibratory rollers required for the purpose is as follows:

a)Static Weight = 6 to 10 t
b)Static Linear Load = 20 – 35 kg/cm
c)Frequency = 18 – 30 Hz (1100 to 1800 vibrations/ minute)
d)Amplitude of vibrations = 0.5 mm to 1.5 mm

5.4.4 Moisture control

So far as practicable, the materials shall be brought to the proper moisture content in the borrow area before excavation. If additional moisture is required, it shall be added at the fill site by sprinkling water before rolling the layer. Thermal Power Plant shall make arrangements for supply of water to the borrow areas as well as to the fill area. If the moisture content is more than requirement, the material shall be spread and allowed to dry

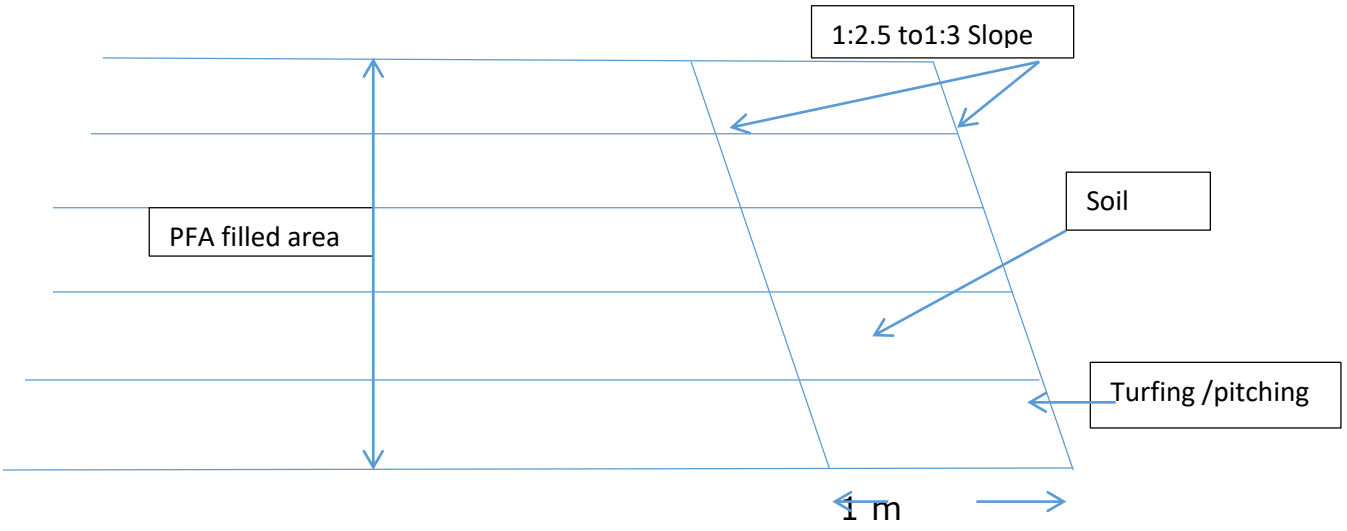
before rolling. The moisture content shall be at most uniform throughout the layer of material and ploughing or other methods of mixing to obtain uniform distribution. If the moisture content is more or less than the range of the required moisture content, or if it is not uniformly distributed throughout the layer, rolling shall be stopped, and shall be started again only when the above conditions are met with.

Fill materials shall be placed only when the weather conditions are satisfactory to permit accurate control of the moisture content in the materials.

5.4.5 **Placement of earth cover in filing area**

Earth cover shall be laid simultaneously with the laying of compacted ash layers and on side slopes. As in the case of ash layers, compacted thickness of earth layers shall not be exceeding 300 mm. As far as top cover of earth is concerned, after the area has been covered with compacted ash up to 500 mm below the required finished level of the area, a compacted layer of 500 mm thickness of suitable earth shall be placed over ash surface. This cover shall be placed in layers, each layer shall be of 250 mm in compacted thickness.

The combined excavation and placing operations shall be such that the materials when compacted in the fill will be blended sufficiently to produce specified degree of compaction on stability. No stones, cobbles or rock fragments, having maximum dimensions more than 25 mm shall be placed in the earth cover. Such stones or cobbles shall be removed either at the borrow pit orbefore it is used as Soil Cover.



Exposed boundary configuration

Other requirements of earth cover laying shall be similar to those of ash laying i.e. as outlined in 5.4.1 to 5.4.4 above.

5.5 Prevention of Pollution

It shall be responsibility of thermal power plant or his contractor that no air borne and water borne pollution shall occur during all stages of operations such as in Borrow areas, during transportation of ash/ earth, during placement of fill material etc. All measures such as water sprinkling covering moist ash/ earth with tarpaulins in open trucks, etc., shall be taken to done care of above.

6.0 Disposal of flyash in voids of abandoned mines

As per notifications 1999 and 2009, power plant shall undertake or approve stowing of mines without using at least 25% of fly ash on weight to weight basis, of the total stowing materials used. Mine void filling on pilot basis is being carried out at the power plants of NTPC Ltd., Bhushan Steel and NALCO in Odisha with prior permission from MoEF & CC and OSPCB. Based on their experience and study conducted by CMPDIL, Ranchi for NTPC Talcher, following methodology is suggested for filling of mine voids with flyash.

6.1 The power plant authority shall carry out following study prior to taking up ash disposal activities in mine void to ensure no change/damage/deterioration in water quality and hydrology in and around the proposed area:

- Ash Characterisation and Leachate Study (Table 1.1)
- Techno-Economic Feasibility Study for disposal of ash into the Quarry
- Topographical Survey of Pipeline Corridor & Mine Void area
- Feasibility of transportation of ash to mine void
- Geotechnical study of the Pipeline Corridor & Mine Void area
- Pre and post filling mine water quality including leachability of metals (Table 1.1)

6.2 Mode of ash transportation to mine void area

One of flowing mode of transport actions of flyash shall be used depending upon the topography of the area:

1. Pipeline using pneumatic conveying system

2. Dumpers/ Trucks
3. Merry Go Round (MGR) System
4. Belt Conveyors in case of dry ash disposal
5. Wet ash (lean slurry or high concentration slurry) through pipeline

6.3 Monitoring:

6.3.1 Regular environmental monitoring to be undertaken during the period of disposal of ash into mine void as well as after the reclamation of mine void. The detailed monitoring programme is given in Tables below:

Table 1.1 : Proposed Monitoring Programme during Disposal of Ash

Samples	Parameters to be Analysed	Frequency
Ash Samples	Chemical Parameters (%): SiO_2, Al_2O_3, Fe_2O_3, K_2O, TiO_2, CaO, MgO, Na_2O, P_2O_5, SO_3 Trace Elements (mg/kg, using TCLP Test): As, Ba, Cd, Co, Cr, Cu, F, Fe, Hg, Mn, Ni, Pb, Zn Radio-activity (Bq/kg): ^{238}U, ^{236}Ra, ^{232}Th, ^{228}Ra, ^{230}Pb, ^{40}K, ^{137}Cs	Once before initiation of filling
Ash Leachate Analysis	Trace Elements (mg/kg, using TCLP Test): As, Ba, Cd, Co, Cr, Cu, F, Fe, Hg, Mn, Ni, Pb, Zn	Once a year
Piezometer Water Samples	Chemical Parameters (mg/l, except, pH and EC): pH, EC, TDS, Total Alkalinity, Ca, Mg, Na, K, Cl, SO_4, NO_3, PO_4, Trace Elements (mg/l): As, Ba, Cd, Co, Cr, Cu, F, Fe, Hg, Mn, Ni, Pb, Zn	Monthly
Mine Water Sample	Same as above	Monthly
Ground Water	Same as above	Twice a year - Pre-monsoon and Post-monsoon
Surface Water Samples	Same as above	Twice a year - Pre-monsoon and Post-monsoon
Soil Samples	Texture, type, pH & cation exchange capacity. Trace Elements (mg/l): As, Ba, Cd, Co, Cr, Cu, F, Fe, Hg, Mn, Ni, Pb, Zn	Once a year

Survey of Flora and Fauna	• Listing of Flora (herbs, shrubs and trees) and Fauna (soil invertebrates and other animals) based on field observations and review of information available • Analysis of trace elements in plants (herbs, shrubs and trees), the invertebrates • Analysis of trace elements in aquatic fauna from the mine void filled with fly ash • Bio-accumulation and Bio-magnification tests	Once in two years

Table 1.2: Proposed Monitoring Programme After Reclamation of Mine void

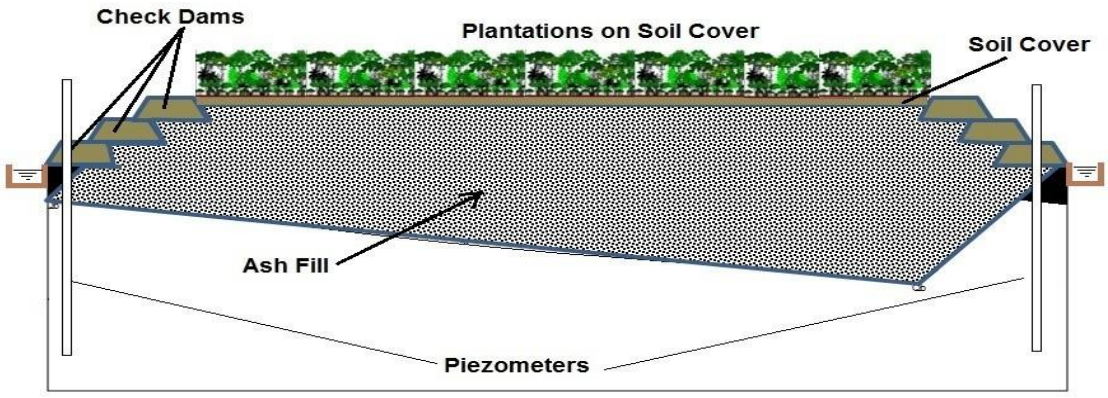
Samples	Parameters to be Analysed	Frequency
Piezometer Water Samples	Chemical Parameters (mg/l, except, pH and EC): pH, EC, TDS, Total Alkalinity, Ca, Mg, Na, K, Cl, SO_4, NO_3, PO_4, Trace Elements (mg/l): As, Ba, Cd, Co, Cr, Cu, F, Fe, Hg, Mn, Ni, Pb, Zn	Twice a year - Pre-monsoon and Post-monsoon
Ground Water Samples	Same as above	Once a year - Pre-monsoon
Surface Water Samples	Same as above	Once a year - Pre-monsoon
Survey of Flora and Fauna	• Listing of Flora (herbs, shrubs and trees) and Fauna (soil invertebrates and other animals) based on field observations and review of information available • Analysis of trace elements in plants (herbs, shrubs and trees), the invertebrates • Analysis of trace elements in aquatic fauna from the mine void filled with fly ash • Bio-accumulation and Bio-magnification tests	Once in five years

In the event of deterioration of environmental quality, the same will be reported to concerned SPCB immediately and suitable preventive/ corrective action will be undertaken.

6.4 Reclamation of Land filled site

After the quarry is filled to the permitted height as per DGMS, the same shall be provided with a soil cover and plantation shall be done with local fast growing species (preferably trees), to make it a part of the overall

post-mining land use pattern envisaged in the mine closure plan The design of surface contours and land profile will be in consonance with the surrounding features. A three tier plantation approach (consisting of large trees, smaller trees and shrubs) will be followed for overall eco-restoration of the area. This will also help in checking the surface run-off, preventing the water from percolation and maintaining the aesthetics beauty of the surrounding in general. A conceptual diagram of the reclaimed mine void is presented below.



Conceptual Plan for Reclamation of Mine Void
(Drawing not to Scale)

During the mine void reclamation, the following measures are to be undertaken:

i. Storm water drains shall be constructed for channelizing the run-off water away from the disposal site.

ii. A 30 cm thick soil cover shall be provided to promote vegetation growth.

iii. For plantation purpose, preference shall be given to both native species and mixed culture. The species will be selected carefully from the following groups for quick reclamation under the guidance of a taxonomist:

- Tree species for fuel wood and timber
- Forestry type tree species.
- Tree species with dense foliage for shade.
- Native species.

iv. However, fruit bearing species shall be avoided.

7.0 Precaution

The following precautionary measures are required for safe working during the reclamation activity:

(i) Appropriate measures should be taken to prevent entry of cattle/livestock inside the disposal area during execution period.
(ii) Care shall be taken to avoid any kind of nuisance / inconvenience to the public due to such dumping / filling activities.
(iii) Water sprinkling for dust suppression during handling of Ash shall be ensured from being air borne.
(iv) After complete reclamation of the site, sign board shall be kept indicating the low lying land / abandoned quarry has been reclaimed with ash. This will help to propagate the message of mine void using ash.

8.0 Regulatory Procedure for Processing the Application for consideration of grant of permission for Reclamation of Low Lying Areas / Abandoned Quarries :

8.1 The activity of reclamation of Low Lying Areas / Abandoned Quarries will be regulated under the provisions of Water (Prevention and Control of Pollution) Act, 1974 and Air Water (Prevention and Control of Pollution) Act, 1981. The stipulations specified in this guideline is consistent with the provisions of Fly Ash Notification, 1999 and amended thereafter which should be a special condition mentioned in consent order issued under the Water (Water (Prevention and Control of Pollution) Act,1974 and the Air Water (Prevention and Control of Pollution) Act, 1981. Thereafter any deviations from the guidelines shall be treated as violation of both Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 and action as deemed proper shall be taken under Consent Administration by the Board.

8.2 Necessary clearances shall be obtained from the concerned agencies such as DGMS, SPCB, IBM, MoC, etc .

Appendix

Guidelines for disposal of flyash in open cast mines along with Over Burden (OB)

As per notifications 1999 and 2009, "No person or agency shall within fifty kilometres (by road) from coal or lignite based Thermal Power Plants, undertake or approve without using at least 25 % of ash on volume to volume basis of the total materials used for external dump of overburden (OB) 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).***

The methodology as approved by Directorate General of Mine Safety (DGMS) in case of M/s JSPL & JPL (RGR/JPL/P-98(1) &(3)/Flyash/18/2014/1518 dated 31.07.2014) may be referred for filling ash in coal mines. **However, for each case separate approval of methodology from DGMS shall be sought**. Following methodology for disposal of flyash in open cast mines along with Over Burden in case of JSPL was approved by DGMS**.**

1.1 Distance of the internal/overbuden dump area from the working faces of mine shall not be less than 100 m.

1.2 The area of filling ash shall be specifically earmarked and the same shall be marked on the plan and dumping fly ash shall be carried out accordingly.

1.3 Height of each deck shall not be more than 30 m and the total height of the dump shall not exceed 90 m.

1.4 The road leading to the dump site for transportation of fly ash shall be independent from the main haul road for transporting OB to the dump site from the mine.

1.5 Method of dumping fly ash

1.5.1 The fly ash shall be dumped in alternate layers/stages, of height not exceeding 5.0 m in each layer/stage.

1.5.2 Initially a row of OB dumps not less than 15.0 m width shall be dumped having height of 5.0 m all around the area proposed for ash dump over a deck (of 30.0 m height) of only overburden dump adequately compacted. A number of such areas shall be formed in a layer/stage wherein the fly ash shall be dumped so that one dump of fly ash is separated by another with 15 m wide over burden dump.

1.5.3 Thereafter, fly ash (25%) and overburden shall be dumped within the area surrounded by such OB dumps. In this manner, the dumping shall be laid in the section/layer of 5.0 m height containing both over burden as well as fly ash so as to form a deck of height not more than 30.0 m , distance between two consecutive decks shall not be less than 30.0 m.

1.5.4 In the next section i.e. immediately above bottom section/stage, only OB dumping shall be made to ensure that the Ash is totally covered and protected from the OB dumps all around.

1.5.5 In the same manner as explained above the alternate layer/section of the over burden and over burden with fly ash shall be dumped. Each layer/stage shall be adequately compacted by dozing.

1.5.6 At the top of the dump i.e. at the final stage, the dump shall be covered with 2.0 m thick soil and adequately compacted by dozing. Adequate precaution against rain fall shall be taken by way of plantation, geo-synthetic, or jute/coir reinforcement and formation of gully drains along the slope of the dump and formation of toe walls and peripheral drains as suggested by the scientific agency conducing geo-technical study. The precaution measures shall periodically be checked for its efficacy.

1.5.7 Plan and section in suitable scale (1:2000) shall be maintained showing the details of the dump both external and interval, height of each deck and dump, distance between the dumps containing fly ash and also the distance from the active working faces, plantation done, gully drains, peripheral drains, toe walls, etc. Such plan shall be signed by the Surveyor and countersigned by the Manager as prescribed in the statute.

1.5.8 Code of practices for transportation, dumping compaction of fly ash as mentioned in para 5(4.2.3 & 5.4.3 of main guidelines), shall be implemented.

1.5.9 **1.6 Dump slope management**

1.6.1 The sides of the OB dumps shall be kept benched and height thereof shall not exceed 30.0 m at an angle of slope not exceeding the angle of repose of the dumped material or 28° whichever is less.

1.6.2 Width of the OB dump shall not be less than 40.0 m which shall also be compacted. The benches shall be laid in such a manner that the overall slope of the dump shall not exceed 21° from horizontal.

1.6.3 The toe of the OB dumps shall be protected or armored in such a manner that the sludge does not flow down into the working faces.

1.6.4 A geotechnical study shall be conducted to assess the stability of the dump and the monitoring of various parameters during the course of dumping and also thereafter till the mine is closed permanently.

1.7**Dust control measures**: The fly ash dumping including the OB dumps shall be kept moist all the time to prevent ash getting airborne. The quality of the Ash shall be chemically and physically tested at least once in every quarter.

1.8 **Surface and ground water quality monitoring**

1.8.1The surface and ground water measurement (Chemical Parameters (mg/l): pH, EC, TDS, Total Alkalinity, Ca, Mg, Na, K, Cl, SO_4, NO_3, PO_4, Trace Elements (mg/l): As, Ba, Cd, Co, Cr, Cu, F, Fe, Hg, Mn,Ni, Pb, Zn) shall be carried out once in a year (post monsoon) in consultation with the State Pollution Control Board in order to ensure that no harmful heavy metals or any other chemicals pollute the surface or ground water sources or any other water sources present in the area.

1.9 **Provision of check drains** Proper Check Drains/garland drains having width of adequate size and section shall be made around the OB dumps to ensure that the sludge or waste materials along with the ash does not go into any river, nullah, water streams or any other surface water bodies.

1.10 Impact assessment of flora, fauna, aquatic lives and habitat, water & air quality:

1.10.1 A scientific study shall be carried out by an independent scientific organization to study the impact of Ash filling on Flora, Fauna, Aquatic Life and Habitation (once during the filing and at the end of filling).

1.10.2The Monitoring of all the aforementioned parameters shall be carried out through any accredited institute/organization/Labs and monitoring report shall be submitted to SPCB and DGMS.

1.10.3 A dedicated team of qualified persons headed by senior officer at the level of General Manager shall be established in the mine level, who shall be responsible for the entire ash filling operation, conducing different studies and shall maintain all records as prescribed.

1.10.4Record of every analysis and study shall be maintained in a bound page register kept for the purpose and the same shall be signed by the person in-charge of the operation and countersigned by the manager of the mine. Records shall also be maintained showing the details about the slope of each dump, quantity of ash filled, quantity of overburden removed, etc.

1.10.5Risk Analysis about the risk arising out of ash filling operation shall specifically be conducted at regular intervals and Safety Management Plan including the control mechanism shall be prepared as per the guideline contained in DGMS(Tech)(S&T) Circular No.13 of 2002 dated 31.12.2002 and implemented and the same shall be reviewed time to time

1.10.6In case, any adverse impact is observed, it should be brought to the notice of the DGMS and also to the State Pollution Control Board including the Environment and Forest Ministries of the State and Central Government. No further use of fly ash shall be done in the mine till permitted in writing afresh from DGMS.

*****

F. No. 22-13/2019-IA.III
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)
*****

Indira Paryavaran Bhawan
Aliganj, Jorbagh Road
New Delhi-110 003

Dated: 28th August, 2019

Office Memorandum

Sub: Change in conditions stipulated in the Environmental Clearances of Thermal Power Plants and Coal Mines in line with the Fly Ash Notification and subsequent amendments - reg.

The Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986 mandates the requirement of prior environmental clearance to the projects/activities listed in the schedule to the said Notification. These projects/activities have been categorized under category A or B and require appraisal/and approval by the respective regulatory authorities (MoEF&CC/SEIAAs) at the Central/State level.

2. As per the provisions of the EIA Notification, 2006, read with subsequent amendments, mining of minerals is covered under Category A/B of the Schedule to the EIA Notification, 2006 based on their areal extent, and thus requiring prior environmental clearance from the concerned regulatory authority.

3. Based on the proposals submitted by the project proponent and recommendations of the sectoral Expert Appraisal Committee, mining projects and thermal power plants were granted Environmental Clearance by the Ministry/State Environment Impact Assessment Authorities (SEIAAs) from time to time, subject to compliance of certain terms and conditions as environmental safeguards necessitated at that stage, which also included the condition for backfilling of mines voids, use/disposal of fly ash in low lying areas, etc.

4. In order to address the environmental concerns of fly ash and to improve its utilization, MoEF&CC has issued a Notification on 14th September, 1999 and subsequent amendments issued vide Notifications dated 27th August, 2003, 3rd November, 2009 and 25th January, 2016 from time to time.

The Fly Ash Notification issued vide S.O.2804 (E) dated 3rd November, 2009 provides for mandatory use of fly ash in the external overburden dump, backfilling or stowing of mines. The main concern is poor fly ash utilization by the pithead power plants mainly because of limited potential in cement industries/road projects and non-utilization of fly ash in stowing and overburden in coal mines.

5. An Expert Committee was constituted for developing a focussed strategy for best utilization of flyash to manufacture end products. The Committee has made recommendations for enhanced utilization of flyash in various sectors viz. mines, roads, bricks manufacturing, cement manufacturing, etc. During an Inter-ministerial consultation held on 21st January, 2019 under the Chairmanship of Secretary (EF&CC), recommendations of the Expert Committee were accepted, which *inter-alia* included the following:-

a) MoEF&CC should revisit the conditions stipulated in the existing environmental clearances of Thermal Power Plants for flyash utilization and modify them in consonance with the flyash notification.
b) Appropriate conditions need to be incorporated in the environmental clearances for utilization of flyash in mines backfilling/stowing.

6. The matter has been examined in the Ministry. Further, the matter has been also been referred to the EAC (Thermal Power Projects) in its meeting held on 28.5.2019 and 12.7.2019. The EAC mentioned that though the Flyash Notification, 1999 and subsequent amendments allow the unrestricted use of flyash in abandoned mines, low lying areas, soil conditioner in agriculture, there are no specific guidelines/methodology available for safe disposal of flyash so as to minimize the damage to the environment. In absence of methodology, EAC has been examining the proposals on case to case basis and recommending for disposal of flyash in abandoned mines. Further, the EAC has also expressed the concerns over the long term impacts of flyash disposal on groundwater, soil quality and impact on associated flora and fauna. Now, the guidelines for disposal of fly ash utilisation in low lying areas and mine voids have been prepared by the Central Pollution Control Board and placed before the EAC (Thermal Power and Coal Mining) in its meeting held on 12.7.2019.

7. In view of the recommendations of the EAC (Thermal Power) in its meeting held on 12.7.2019, after careful examination of the matter and to meet the objectives of the Fly Ash Notification, 1999 & its amendments, the Ministry hereby stipulates the following conditions in the existing Environmental Clearances of Thermal Power Plants and Coal mines which have valid Environmental Clearance accorded by the Ministry/SEIAA, that will replace the existing conditions (Specific & General) which prohibited the use of fly ash in abandoned mines/low lying areas/soil conditioner in agriculture:

i. The guidelines prepared by CPCB for disposal of flyash for reclamation of low lying areas and in stowing/backfilling of abandoned mines/quarries shall be followed during disposal of ash in abandoned or working mines, as annexed.

ii. There should at least be clearance of 500 m of safe distance be maintained from River and water body in case of ash disposal in abandoned mines to prevent embankment failures and flyash flowing into the nearby water body.

iii. The top layer of the flyash disposal area in the abandoned mines shall be kept moist during disposal.

iv. Top layer of the disposed area should have 70 cm overburden or gravels/stones and then 30 cm sweet soil cover. Subsequently, the vegetation shall be raised on the soil cover.

v. Bioaccumulation and bio-magnification tests shall be conducted on surrounding flora and fauna (tree leaves, vegetation, crop yields and cattle population) during pre-monsoon and post monsoon to find out any trace metals escaped through groundwater or runoff.

vi. Surface runoff and supernatant water, in any case shall not be let into the surrounding areas. It shall be collected by providing adequate drains around the mine. The supernatant water along with surface runoff shall be treated and re-used for mixing ash and plant operations.

vii. To the extent possible, only decanted water from mine, make up water from treated effluents such as cooling tower blow down and treated sewage water shall be used for making ash slurry.

viii. Flyash to be used as soil conditioner in agriculture needs and to be applied in controlled manner to limit excessive application so as to prevent soil degradation. The optimize proportion of ash to be applied which is to be certified by the State Agricultural Universities/Colleges based on the soil testing.

ix. Approval from DGMS shall be obtained before disposing the ash in the mine voids.

x. Technology for conversion of fly ash into coarse granules for stowing in the underground mines to be explored.

xi. All the power plants should install different silos for dry collection of flyash.

xii. Records pertaining to details of month-wise quantity of flyash disposed and water consumption along with nature/source of water shall be maintained and submitted to Ministry/Regional Office annually.

xiii. Before starting the disposal of ash into mine voids, the NOC/Permission from the mine owner is to be obtained incase the mine closure activities are not completed or State Government incase the mine has been handed over to the State Govt. after its closure. A copy of such NOC/Permission is to be submitted to the Ministry and its Regional Offices.

8. This issues with the approval of the Competent Authority.

(Dr. S. Kerketta)
Director, IA Division

To

1. The Chairman, Central Pollution Control Board (CPCB)
2. The Chairman/Member Secretaries all the Expert Appraisal Committees
3. The Chairman /Member Secretaries of all the SEIAAs/SEACs
4. The Chairman/Member Secretaries of all SPCBs/UTPCCs
5. All the Power Plant Operators/ Coal Mining Operators who were accorded Environmental Clearance.
6. All the ROs of MoEF&CC.
7. All the Officers of I.A. Division

Copy for information to:

1. PS to Hon'ble Minister for Environment, Forest and Climate Change
2. PS to Hon'ble MoS (EF&CC)
3. PPS to Secretary(EF&CC)
4. PPS to SS(AKJ) / AS (RSP)
5. Sr.PPS to JS (GM)/ JS(NK)
6. Website of MoEF&CC.
7. Guard file.

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन और राजमार्ग मंत्रालय)
National Highways Authority of India
(Ministry of Road Transport and Highways)
जी-5 एवं 6, सेक्टर-10, द्वारका, नई दिल्ली-110075
G-5 & 6, Sector-10, Dwarka, New Delhi-110075

दूरभाष / Phone : 91-11-25074100/25074200
फैक्स / Fax : 91-11-25093507 / 25093514

Ref.: NHAI/Tech/Fly-Ash/2010/141862 **Date:** 30.09.2019

To,

The Joint Secretary
Ministry of Environment, Forest & Climate Change
Government of India
Indira Paryavaran Bhawan,
Jor Bagh Road,
New Delhi - 110003
Email: nidhi.khare@nic.in

Sub.: Action taken on recommendations of the Expert Committee for enhanced utilization of fly ash - Reg.

Ref.: MoEF&CC DO letter no. 09.02.2018-HSM dated 23.09.2019

Madam,

With reference to above, the following action taken report, on recommendations of the Expert Committee for enhanced utilization of fly ash in various sectors including roads, is submitted for your kind perusal.

a) The use of Fly Ash is mandated for NHAI construction works falling within a radius of 300 kms from Thermal Power Plant (TPP) as per notification dated 25.01.2016. As per the MoU finalized with NTPC, *the rate for transportation of fly ash will be as per the prevailing schedule of rates of the respective state and where such rates are not available, the same will be decided mutually by NHAI & NTPC*. NHAI officers are accordingly coordinating with the TPPs.

b) The highway projects requires considerable quantity of pond ash in embankment construction which is useful as a countermeasure to curb the environmental pollution. The Concessionaires/ Contractors have been pressing hard to make the ash available to them accordingly. However, it is learnt that the TPPs are reluctant to enter into the MoU with NHAI/ Contracting agencies for payment of transportation costs. Though, NHAI has been also making consistent efforts to follow MoEF&CC

guidelines, the support from some of the TPPs is not forthcoming. Chairman, NHAI has also requested CMD, NTPC for timely resolution of issues related to non-signing of MoU and delay in supply of fly ash by NTPC's TPPs leading to contractual implications in the ongoing projects of NHAI. Copy of the referred DO letter is enclosed herewith as Annex-1.

c) The project wise requirement of fly ash in NHAI works has been indicated to the Ministry of Power, besides NTPC, with a request to issue directions to NTPC officials to ensure utilization of fly ash in NHAI projects. Copy of the referred letter is enclosed herewith as Annex-2.

2. In view of above, it is therefore requested to direct the concerned officials of NTPC to ensure uninterrupted supply of fly ash in NHAI works.

3. This issues with the approval of the Competent Authority.

Thanking You.

Encls.: As above

30/9/19

(Ajay Kumar Sabharwall)

GM (T) - SRD&Q

Annex - 1

नागेन्द्र नाथ सिन्हा, आई.ए.एस.
अध्यक्ष
NAGENDRA NATH SINHA, I.A.S.
CHAIRMAN

सत्यमेव जयते

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
सड़क परिवहन और राजमार्ग मंत्रालय
National Highways Authority of India
Ministry of Road Transport & Highways
NHAI, G-5&6, Sector-10, Dwarka, New Delhi-110075
Tel:+91-11-25076503, Fax:+91-11-25093605, E:chairman@nhai.org

DO No. NHAI/Tech/Fly-Ash/2010/ 14068
September 06th, 2019

Sub: Use of Pond Ash in NHAI works.

Dear Sir,

As you are aware, the NHAI is implementing the ambitious Bharatmala Programme of the Government of India, which envisages construction of 34,800 km of highways across the country, apart from an existing plan of building 48,877 km of new highways.

2. In accordance with MoEF&CC Gazette Notification no. 254 (E) dated 25.01.2016, the use of pond ash for construction works falling within a radius of 300 km from any Thermal Power Plant (TPP) had been mandated and the same is binding on the Concessionaire/ Contractor of NHAI executing the respective works.

3. The above notification dated 25.01.2016 also stipulates that a MoU or an agreement for using of Ash is to be made between the TPP unit and Construction Agency/ Contractor. Accordingly, a sample MoU had been finalised between NTPC and NHAI and the provisions on use of pond ash in NHAI's works had been laid down in the contract agreements. Now, the concessionaires of NHAI have been pressing hard to make the ash available to them, as per notification.

4. However, it is learnt that the MoUs, as per above Gazette Notification dated 25.01.2016, are yet to be signed by some of the NTPC's TPP units for supply of ash to NHAI's project sites. You would appreciate that non signing of MoUs and delay in supply of flyash by NTPC's TPP would lead to contractual implications in the ongoing projects. The issue raised by PD, NHAI, Visakhapatnam vide letter dated 03.07.2019 (copy enclosed) is yet to be resolved. You may recall that I had mentioned this to you when we met during Finance Minister's meeting on 04.09.2019.

5. You may also appreciate that while NHAI has been making continuous efforts to follow the guidelines of MoEF&CC on use of pond ash, however, the support from some of the TPPs is not forthcoming. The highway projects generally require considerable quantity of pond ash in embankment construction which is useful as a countermeasure to curb the environmental pollution.

6. In view of above, I request you to direct your TPPs to sign the MoUs as per project specific requirements & comply with the provisions of above Gazette Notification of MoEF&CC in totality including bearing the cost of transportation. Your intervention in timely resolving the issue would be deeply appreciated.

With warm regards,

Yours sincerely,

6/9/19

(Nagendra Nath Sinha)

Encl.: As above

O/C

Shri Gurdeep Singh
CMD, NTPC Limited
NTPC Bhawan, SCOPE Complex,
Institutional Area, Lodhi Road,
New Delhi - 110003

Copy for kind intervention to:

(i) Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi
(ii) Secretary, MoEF&CC, Indira Paryavaran Bhavan, Ali Ganj, Jorbagh Road, New Delhi

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
National Highways Authority of India
(सड़क परिवहन और राजमार्ग मंत्रालय)
(MINISTRY OF ROAD TRANSPORT & HIGHWAYS)
परियोजना कार्यान्वयन इकाई (जि क्यू), भा.रा.रा.पा. एन्क्लेव, कि.मी.2/8 रा.रा.5.,
Project Implementation Unit (GQ), NHAI Enclave, KM 2/8 NH-16
हनुमन्तवाका, विशाखपट्टणम् - 530 040, ए.पि., भारत
Hanumanthavaka, Visakhapatnam - 530 040, A.P., India

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फाक्स / Fax No. : 0891-2714118
ई-मेइल / E-mail : vis@nhai.org

Ref.:NHAI/PIU-VSKP/6-Laning/ADP-AKP/Dilip/2018-19/ 791

Dt.03/07/2019

To
ED (Envt/Ash Mgmt/Safety)
NTPC Limited, Corporate Centre,
Engineering Office Complex,
Plot No.A-8A, Sector-24,
Post Box No.13, Noida-201301.

Sub : NHAI, PIU, Visakhapatnam – (i) 6-laning of Anandapuram-Pendurthi-Anakapalli section of NH-16 (earlier MDR/SH-38) under Bharatmala Pariyojana on HAM (ii) Four lane connectivity to Vishakhapatnam Port under Port Connectivity under Bharatmala Pariyojana on HAM (iii) Six laning of Narasannapet - Ranasthalam section of NH-16 in the State of Andhra Pradesh under NHDP Phase V on Hybrid Annuity Mode (iv) Six laning of Ranasthalam – Anandapuram section of NH-16 in the State of Andhra Pradesh under NHDP Phase V on Hybrid Annuity Mode (v) Capacity augmentation of the existing 4-lane stretch from Ichapuram to Narasannapeta of NH-16 under NHDP Phase-V on EPC Mode – **Use of Pond Ash in Road Construction – Reg.**

Ref: Ministry of Environment, Forest and Climate Change Gazette Notification dated 25.01.2016.

The details of pond ash for ongoing project of PIU, Visakhapatnam are given below.

S. No	Reach for which bids invited	Concessionaire	Length (Km)	Pond ash requirement	MOU signed	MOU to be signed
1	6-laning of Anandapuram-Pendurthi-Anakapalli section of NH-16 (earlier MDR/SH-38) under Bharatmala Pariyojana on HAM	M/s.DBL Anandapuram Ankapalli Highways Pvt. Ltd.,	50.780	40 Lakh MT	14 Lakh MT	26 Lakh MT
2	Four lane connectivity to Vishakhapatnam Port under Port Connectivity under Bharatmala Pariyojana on HAM	M/s.Sadbhav Vizag Port Road Private Limited (terminated)	12.700	6.5 Lakh MT	---	6.5 Lakh MT (not required)
3	Six laning of Narasannapet - Ranasthalam section of NH-16 in the State of Andhra Pradesh under NHDP Phase V on Hybrid Annuity Mode	M/s.APCO Arasavalli Expressway Pvt. Ltd.	54.2	15 Lakh MT	---	15 Lakh MT
4	Six laning of Ranasthalam – Anandapuram section of NH-16 in the State of Andhra Pradesh under NHDP Phase V on Hybrid Annuity Mode	M/s.Ashoka Ranasthalam Anandapuram Road Limited	47.000	30 Lakh MT	18 Lakh MT	12 Lakh MT

Contd ...2

5	Capacity augmentation of the existing 4-lane stretch from Ichapuram to Narasannapeta of NH-16 under NHDP Phase-V on EPC Mode	M/s.SPL CCCL JV	13.400	4 Lakh MT	---	4 Lakh MT

2. The whole idea of usage of pond ash as fill material for embankment is based on pond ash being waste/environmentally hazardous material and therefore, Ministry of Environment, Forest and Climate Change Gazette Notification S.O.No.254(E) dtd. 25.01.2016, the use of pond ash is mandatory for construction works falling within a radius of 300 Km from any Thermal Power Plant (TPP) and the same has been provisioned in the subject work.

3. In this regard, kind attention is invited to the letter No.ED(SEA)/2018/NHAI/01, Dt.21/08/2018 of NTPC corporate office wherein the details of availability of pondash as well as pond ash have been furnished with regard to Simhadri Power Plant.

4. It is brought to your notice that following repercussions has to be faced by this PIU in case of non-signing of MOU and subsequent delay in supply of pond ash to the concerned project concessionaires.

(i) The conditions pertaining to compulsory use of pond ash as per the Gazette notification number 254(E), dated 25/01/2016 has been incorporated in NHAI's tender documents based on which the Concessionaire has quoted this bid. Now in case the same is not being made available by the NTPC, there will be cost and time over run for the ongoing projects.

(ii) Envisaging the availability of pond ash and as per the positive verbal response given by your good office, our Concessionaire/Contractor has started structural works at about 50 locations duly diverging the heavy traffic to diversion roads and therefore, unavailability of pondash at this crucial junction may risk the safety of traffic plying on the road.

Contd ...3

Keeping in view the above facts, we hereby again request the corporation for signing of MOUs for balance requirement of pond ash and start supplying the pond ash at the earliest in the interest of the project and to avoid loss to State.

Yours faithfully,

(N.Hari Krishna),
Project Director.

Copy to

(i) The Secretary, MOEF, New Delhi for favour of information.
(ii) Collector & District Magistrate, Visakhapatnma for favour of information.
(iii) Collector & District Magistrate, Vizianagaram for favour of information.
(iv) Collector & District Magistrate, Srikaklam for favour of information.
(v) Member (Projects), NHAI, New Delhi for favour of information.
(vi) Chairman, NHAI, New Delhi for favour of information.
(vii) GM(T)-AP, NHAI, New Delhi for favour of information.
(viii) RO, NHAI, Vijayawada for favour of information.
(ix) GGM(T), NTPC, Simhardi for favour of information.
(x) AGM(T), NTPC, Simhardi for favour of information.
(xi) CPCB, New Delhi GGM(T), NTPC, Simhardi for favour of information.
(xii) APPCB, Visakhapatnam GGM(T), NTPC, Simhardi for favour of information.

Annex-2

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन और राजमार्ग मंत्रालय)
National Highways Authority of India
(Ministry of Road Transport and Highways)
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दूरभाष /Phone : 91-11-25074100/25074200
फैक्स /Fax : 91-11-25093507 / 25093514

NHAI/Tech/Fly-Ash/2010/12983 2

29th January'19

To,

Sh. S. Majumdar,
Under Secretary,
Ministry of Power,
Shram Shaktik Bhawan
Rafi Marg New Delhi- 110001

Sub: Utilization of Pond Ash by Coal based Thermal Power Plants.

Ref: Minutes of Meeting dated 3.01.2019 & Letter dated 14.01.2019

Sir,

In reference to the Meeting dated 3.01.2019 and 24.01.2019, please find enclosed herewith detailed list of the projects of NHAI, where there is requirement for Fly-ash within a distance of 300 Kms from the NTPC stations. The contact number of the concerned officers of NHAI coordinating to the projects are also mentioned in the list.

2. All the concerned Project Directors of NHAI have been issued instructions to coordinate with NTPC.

3. It is requested that similar directions to the concerned NTPC official may kindly be issued.

4. This issues with the approval of the Competent Authority.

29/1/19

(Ajay Kumar Sabharwall)
GM (T)—SRD&Q

Copy to :

i. ED (Fly Ash Management), NTPC Ltd, Scope Complex, Lodhi Road, New Delhi.
ii. RO's concerned / PD's concerned

Sr.No.	Name of nearby Thermal Power of Plant	Name of the Project/ NH No.	Length of the Project (km)	Quantity of fly ash that can be utilised (Tonnes)	Average lead of the project from plant (in kms)	Date of award of the project	Remarks, if any
1	2	4	5	6	7	8	9
RO- Varanasi		Name: Shri Rajeev Aggarwal	Contact: 7052911111				
PIU- Azamgarh		Name: Shri Navin Mishra	Contact: 7860563333				
1	NTPC Tanda ,U.P.	4-laning of Ghaghra Bridge to Varanasi section from km. 121.800 to km. 180.420 NH-233 (Package-1)	58.635	415000	15	15.12.2015	-
PIU- Gorakhpur		Name: Shri A. K. Kushwaha	Contact: 8004936048				
2	NTPC TANDA (UP)	Gorakhpur bypass NH-29 E	17.66	318420	115	26.12.2016	-
3	NTPC TANDA (UP)	Varanasi -Gorakhpur Section of NH-29, Pkg-III	65.38	3172373	134	04.03.2016	-
4	NTPC TANDA (UP)	Varanasi -Gorakhpur Section of NH-29, Pkg-IV	65.62	2649849	100	04.03.2016	-
PIU- Mirzapur		Name:					
5	Obra Thermal Power Plant, Power House Road, Obra, Uttar Pradesh-231219.	Rehabilitation and Up gradation form 2-lane to 4 lane of NH stretch under NHDP-IVB for Varanasi to Dagamagpur from Km. 15+100 to Km. 49+100 (pkg-1) section of NH-7 on EPC mode in the state of Uttar Pradesh.	34	250000	155	27.02.2018	-
6	Obra Thermal Power Plant, Power House Road, Obra, Uttar Pradesh-231219.	Rehabilitation and Up gradation form 2-lane to 4 lane of NH stretch under NHDP-IVB for Dagamagpur to Lalganj from Km. 49+100 to Km. 96.800 (pkg-2) section of NH-7 on EPC mode in the state of Uttar Pradesh.	47.7	400000	114	13.03.2018	-
7	Obra Thermal Power Plant, Power House Road, Obra, Uttar Pradesh-231219.	Rehabilitation and Upgradation form 2-lane to 4 lane of NH stretch under NHDP-IVB for Lalganj to Hanumanha from Km. 96.800 to Km. 140.200 (pkg-3) section of NH-7 on EPC mode in the state of Uttar Pradesh.	43.4	350000	70	22.03.2018	-
PIU- Raebareilly		Name: Shri C.M. Dwivedi	Contact: 9648844442				
8	NTPC, Unchahar	NH-232, Tanda to Raebareli section to 2 lane with paved shoulders from Km. 0.000 to km.155.900. in the state of Uttar Pradesh on EPC mode.	155.900	34787	35		147+654 (ROB Raebareli). Qty. Already utilized in this project 27048
	NTPC, Tanda			29626	35		18+195 (ROB Akbarpur Bypass). Qty. Already utilized in this project 19864
9	NTPC, Unchahar	NH-24B, Raebareli to Allahabad Section 2 lane with paved shoulders from Km. 82.700 to Km 188.600, in the state of Uttar Pradesh on (DBFOT) on Toll Basis under - Phase IV A"	106.600	49000	10		Fly-ash used for approaches of VUP & ROB located at Unchahar. Qty. Already utilized in this project :1000
PIU- Lucknow		Name: Shri Siva Shankar	Contact: 8419086666				
10	NTPC, Unchahar, UP	Lucknow-Sultanpur NH-56 (New NH-731)	127.425	28588.61	82	08.05.2018	

11	Unchahar, Raebareli	Construction of NH-28 4-Lane Bypass Starting from KM 17.600 of MDR-77C and terminating at KM 15.650 of NH-28 (bypass CH.From79.516/79.000 to 94.457/93.473 total length of 14.707 km.) in the State of Uttar Pradesh Under NHDP Phase-VII on Engineering Procurement and Construction (EPC) MODE	14.707 Km	4000	140	03.01.2017	
PIU- Varanasi		Name: Shri Samar Bahdur Singh		Contact: 9997870088			
12	NTPC Unchahar	NH-56, Pkg-I from Sultanpur (Km 134.700) to Jaunpur (Km 209.230) Sultanpur to Varanasi	74.53	1761400	141	24.08.2015	Flyash work under progress
13	NTPC Unchahar	NH-56, Pkg-II from Jaunpur (Km 209.230) to Varanasi (Km 272.590) Sultanpur to Varanasi	63.36	1682000	197	24.08.2015	Flyash work under progress
14	NTPC (Tanda Thermal Power Plant)	4-Laning of Varanasi Gorakhpur Section of NH-29 from Km 12.000 (Design Chainage Km. 12.010) to Km. 88.000 (Design Chainage Km. 84.160) [Package-II from Sandah to Birnon] in the State of Uttar Pradesh under NHDP PHASE-IV on EPC mode.	72.15	847501	202	31.03.2016	Use yet to start as M.O.U. Signing with NTPC is in process.
15	Tanda NTPC	4 Laning of Ghaghra Bridge to Varanasi Section of NH -233 From KM 180+420 to Km 240+340 Package-II (Bhudanpur Urban Section to Start of Gossai Bazar Bypass) in the State of Uttar Pradesh under NHDP Phase IV	59.92	691609	151	21.08.2015	Fly ash work under progress.
16	Tanda NTPC	4 Laning of Ghaghra Bridge to Varanasi Section of NH -233 From KM 240+340 to Km 299+350 Package-III (Gossai Bazar Bypass to Varanasi) in the State of Uttar Pradesh under NHDP Phase IV	59.01	760478	202	21.08.2015	Fly ash work under progress.
PIU- Allahabad		Name: Shri Pankaj Mishra		Contact: 8004929085			
17	NTPC, Renusagar	6 laning of Handia to Varanasi section of NH-2 from Km. 713.146 to Km. 785.544	72.398	14000	200	05.12.2017	
RO- Dehradun		Name: Shri C.K. Sinha		Contact: 9979892544			
PIU- Dehradun		Name: Shri P.S. Gosain		Contact: 9568235222			
18	Deenbandhuchhoturam thermal power plant - Yamunanagar	Four Laning of Chutmalpur–Ganeshpur of NH-72A & Roorkee-Chutmalpur-Ganeshpur of NH-73	53.300	26500 MT	62 Km	30.03.2016	Flyash is used only in PQC@20% of cement.
PIU- Najibabad		Name: Shri Narendra Kumar		Contact: 9760037767			
19	NTPC, Dadri	Haridwar-Nagina section of NH-74	71.614	Fly ash- 50,000 Tonne Pond ash-5 Lac Tonne	194	31.03.2016	-
	Deenbandhu Chhotu Ram Thermal Power Station, Yamunanagar				138		
	Panipat Thermal Power Station				170		

20	NTPC, Dadri Roza Thermal Power Plant, Shahjahanpur(UP)	Nagina-Kashipur section of NH-74	98.793	6840000	184 241	31.03.2016	Fly ash use in 40,000MT in concrete and 68.00,00MT in back filling in underpasses and RE wall
RO- Ranchi	Name: Shri Vijay Srivastava	Contact: 9650911334					
21	Chandrapura Thermal Power Station (CTPS) Bokaro Power Supply Co. (P) Ltd. Herein referred to BPSCL	2/4 laning + PS from Rajganj-WB Border section of NH-32	56.889	761472	21 24	19.07.2016	-
22	Tata Power Company Ltd, Jamshedpur	4-laning of Mahulia-Behragora Section of NH-33&06	71.61	25000	81	02.02.2016	-
RO- Kerala	Name: Lt. Col. Ashish Dwivedi	Contact: 9746837100					
23	UPCL (Udupi Power Co- orperation Ltd.)	Four laning Thalassery- Mahe Bypass, NH 17	18.6 Kms	800	250 Kms	25.10.2017	
24	NLC Thermal Power Plant,Tuticorin	Four Laning of Mukkola Junction to Kerala/Tamilnadu Border from Km. 26+500 to Km. 43+000 of NH-47 (New NH-66) under NHDP Phase-III in the state of Kerala on EPC Mode	16.202 Kms	21683	182 Kms	15.06.2016	
RO- Hyderabad	Name: Shri A.Krishna Prasad	Contact: 9441437979					
25	NTPC Ramagundam	Four lanning of yadgiri- warangal section of NH-163 (New NH-202) from km 54+000 to km 150+000 (design length 99.103 km) Under NHDP Phase IV to be executed under EPC Mode in the state of Telangana	99.103	6000	152	01.06.2016	BTPC informed that they do not have budgetary provision for transporting the fly ash at free cost. Hence, Contractor is not using fly ash.
26	NTPC Ramagundam	four laning of NH-161 from "Ramsanpalle Village (Design Km 39.980/ Existing Km 44.757) to Mangloor Village (Design Km 86.788/ Existing km 91.350) (design length=46.808 km) in the state of Telangana under Bharatmala Pariyojana on Hybrid Annuity Mode	46.808	1000000	300	26.03.2018	To be utilized in RE- WALL and High Embankment location
RO-Madurai	Name: Shri Gali Sreedhar	Contact: 8179959123					
PIU- Karaikudi	Name: Shri S.S. Baskaran	Contact: 9994962258					
27	Tuticorin Thermal Power Station	Two lane with paved shoulders of Karaikudi - Ramanathapuram section of NH 210	80	104800	236	17.08.2017	Lead will be more.
PIU- Thanajvur	Name: Shri C. Sudhakara Reddy	Contact: 7548891777					
28	Neyveli Lignite Corporation Plant, Neyveli Mettur Thermal Power Station, TNEB, Mettur	Two laning with paved shoulders of Nagapattinam – Thanjavur section of NH-67 from km 1.600 to Km 80.133	78.533	2000000	125 275	17.03.2015	-

29	Neyveli Lignite Corporation Plant, Neyveli	4-laning of Vikkravandi - Sethiyathopu Section of NH-45C from Km 0.000 to Km 65.960	65.96	500000	58	24.03.2017	-
	Ennore Thermal Power Station, Ennore				205		-
	Mettur Thermal Power Station				253		-
30	Neyveli Lignite Corporation Plant, Neyveli	4-laning of Sethiyathopu – Cholapuram Section of NH-45C from Km 65.960 to Km 116.440	50.48	500000	40	29.09.2017	-
31	Neyveli Lignite Corporation Plant, Neyveli	4-laning of Cholopuram-Thanjavur section of NH-45C from km.116.440 to164.275	47.835	1900000	100	29.08.2017	-
PIU- Nagercoil		Name: Shri Muthudayar		Contact: 9994522212			
32	NLC Thermal Power Station, Tuticorin	Four laning of Kerala / Tamil Nadu Border - Villukuri section of NH-47	27.250	21800	180	10.03.2016	Total requirement can be met from Tuticorin Plant
33	NLC Thermal Power Station, Tuticorin	Four laning of Villukuri - Kanniyakumari section of NH-47 & Nagercoil - Kavalkinaru section of NH-47B	42.703	29328	122	10.03.2016	Total requirement can be met from Tuticorin Plant
RO-Gujarat		Name: Shri Ashutosh Gautam		Contact: 9830027739			
34	Tadkeshwar GIPCL	Six laning of Kamrej - Chalthan Section from Km. 248.100 to Km. 264.350 of NH-8 including long term remedial measures for 4 Black Spots in Kamrej-Bharuch Section of NH-8 in the State of Gujarat on EPC mode	16.250 Km.	15000	30 Km.	20.03.2017	-
35	Gandhi Nagar	Six Lanning of NH 8 from Ch: 540+595 to Ch: 555+905	15.31	740000	22 kms	15.11.2016	
36	Sikka Thermal Power Station	Four Laning with paved shoulder of Porbandar- Dwarka section of NH-8E (Ext.) from km 356.766 Design Chainage km 379.100) to km 473.000 (Design Chainage km 496.848) in the State of Gujarat through Public Private Partnership (PPP) on Hybrid	117.748	71766.14	70 Kms	02.06.2017	--
RO-Chennai		Name: Shri Pawan Kumar		Contact: 9999918147			
37	Ennore Thermal Power Plant	Chennai to Tada six laning balance works/NH-5	33	845000	45km	29.12.2017	Works pertaining to usage of fly ash yet to be commenced.
38	Neyveli	Four laning of Viluppuram to Puducherry Section of NH-45A(Pacakge-I) Km.0/000 to Km.29/000)	29.00	500000	57	16.03.2018	works are yet to commence and the requirement of fly ash is proposed to utilise for embankment & PQC
39	Neyveli	Four laning of Puducherry to Poondiyamkuppam Section of NH-45A(Package-II) Km.29/000 to Km.67/000	38.00	300000	66	16.03.2018	
40	Neyveli	Four laning of Poondiyamkuppam to Sattanathapuram Section of NH-45A(Package-III) Km.67/000 to Km.123/800	56.80	500000	65	16.03.2018	
41	Neyveli	Four laning of Sattanathapuram to Nagapattinam Section of NH-45A(Package-IV) Km.123/800 to Km.179/555	55.755	500000	80	05.07.2018	
42	Neyveli	Four laning of Trichy to Kallagam Section of NH-227(Package-I) Km.0/000 to Km.38/700)	38.700	300000	83	28.02.2018	
43	Neyveli	Two lane with paved shoulders from Kallagam to Meensurutti Section of NH-227(Package II) Km.38/700 to Km.98/433	59.733	500000	50	16.03.2018	
44	Neyveli	Two lane with paved shoulders from Meensurutti to Chidambaram Section of NH-227(Package III) Km.98/433 to Km.129/965	31.532	200000	30	07.03.2018	

RO-Patna	Name: Sh.A K Mishra	Contact No.: 7482999231					
45	BTPS (Barauni Thermal Power Station) NTPC, Barh, Patna	Four laning of Simaria Khagaria of NH-31	60.232	330000	30 51	29.01.2016	
46	NTPC, Kahalgaon (Bihar)	Rehabilitation&Upgradation of Two laning of Maheshkhunt-Saharsa-Purnea section of NH 107 from km. 90.000 to km. 177.960 in the State of Bihar on EPC Mode-Package-II	87.96	225000	175	31.03.2017	
47	NTPC - Barh, Bihar.	Four/Six laning (Ganga Bridge with approch road Project) on NH-31 (Design Chainage from197.000 to 206.050)	8.15	2100000	34	10.11.2017	
48	NTPC Barh (Patna)	Four Laning of Patna-Gaya-Dobhi section (Km. 0.00 to km. 127.217) of NH-83 in the State of Bihar to be executed under JICA ODA Loan Assistance	127.217	892119	100	10.04.2015	
49	NTPC Barh (Patna)	4 laning of Bakhtiyarpur-Mokama section of NH-31 from Km 153.300 to Km 197.900(Design Chainage) Existing Chainage Km 153.300 to Km 204.740Under NHDP Phase - III	44.6 Km	6000000 Cum	1)Barh NTPC to Project -2 km 2)Barauni BTPC to Project -11km	14.06.2017	
50	Obra Thermal Power Station, Uttarpradesh	Six Laning of Varanasi-Aurangabad Section of NH-2 from Km 786.000 to Km 978.400 in the State of U.P./Bihar on BOT (Toll) basis under NHDP Phase-V.	192.4	300000	255 Km at ROB Ch 941	12.09.2011	
RO-Odisha	Name: Shri D. Sarangi	Contact: 8130781101					
PIU- Kenojhar	Name: Shri R.K. Hardas	Contact:9438826126					
51	NTPC Ltd., Talcher Super Thermal Power Station, Deepshikha, Angul	Rehabilitation and Upgradation of Four laning of Binjabahal – Tileibani Section, Km.414.000 to Km.491.710 (Design Chainage Km.414.982 to Km.493.300) of NH-6 (New NH-49) in the Stated of Odisha under NHDP-IV, on Hybrid Annuity Mode	78.318	1020000	96 Km.	13.10.2016	MOU has already been executed between NHAI, PIU, Keonjhar & NTPC Ltd. on 18.05.2018 for supply of 10,20,000 Mt. (816000 Cum.) Pond Ash
52	NTPC Ltd., Talcher Super Thermal Power Station, Deepshikha, Angul	Rehabilitation & Upgradation to four laning of Singara to Binjabahal section from Ch. Km.311.000 to Km.414.000 (Design Chainage from Km.310.806 to Km.414.982) of NH-6 (New NH-49) in the State of Odisha under Hybrid Annuity Mode	104.176.	935250	73 Km.	29.03.2017	MOU has already been executed between NHAI, PIU, Keonjhar & NTPC Ltd. on 03.07.2018 for supply of 1,20,000 Cum (258000 Mt.) of Pond Ash
PIU- Rourkela	Name: Shri P. Madhu	Contact: 9490169937					
53	M/s NSPCL-SAIL Power Co. Ltd., CPP-II, Rourkela	Four laning of Biramitrapur to Brahmani Bypass End Section of NH-23 (Pkg-I)	29.1	367000	20	19.07.2017	Appointed Date has been declared w.e.f. 23.05.2018 for Structure Components Only
	M/s NSPCL-SAIL Power Co. Ltd., CPP-II, Rourkela	Four laning of Brahmani Bypass End to Rajamunda Section of NH-23 (Pkg-II)	46.95	1100000	50	28.12.2017	Appointed Date is yet to be declared
	M/s NSPCL-SAIL Power Co. Ltd., CPP-II, Rourkela	Four laning of Rajamunda-Barkote Section of NH-23 (Pkg-III)	49.985	100000	90	16.01.2018	Appointed Date has been declared w.e.f. 17.12.2018

	M/s NSPCL-SAIL Power Co. Ltd., CPP-II, Rourkela	Four laning of Koida-Rajamunda Section of NH-215 (Pkg-II)	53.162	200000	90	31.01.2018	Appointed Date has been declared w.e.f. 08.05.2018
	M/s Tata Sponge Iron Ltd., Keonjhar	Four laning of Rimuli-Koida Section of NH-215 (Pkg-I)	43.2	400000	40	31.01.2018	Appointed Date has been declared w.e.f. 12.05.2018
PIU- Sambalpur	Name: Shri R. Venkateshwarlu	Contact: 7873562555					
54	NTPC NALCO M/s Hindalco Industries M/s Vedanta Ltd	Rehabilitation and up-gradation to four laning of Angul-Sambalpur section of NH-42 (New NH-55) km. 112.000 to Km. 265.000	150.86	1314376	77	22.07.2016	Quantity of fly ash used in the project till date is 88,075 MT.
55	Hindalco Power Plant, Hirakud	Rehabilitation and up-gradation by four laning with paved shoulders of Teleibani to Sambalpur section from km. 493.300 to Km. 521.825 and km.545.176 to Km. 567.400 of NH-6	50.749	170000	36	31.12.2018	Quantity of fly ash used in the project till date is 7665.78 MT.
PIU- Panvel	Name: Shri Prashant J. Fegade	Contact: 7738176575					
56	Nashik Thermal Power Plant - Maharashtra State Electricity Board	**Package No. I -** Construction of Karalphata Interchange from Km 3.600 to 6.073 of NH-4B & From 5.300 to Km 7.422 of NH-348 (Old SH-54) and connectivity to proposed 4th terminal of JNPT.	17.117	3507	200	16th May 2016	
57	Nashik Thermal Power Plant - Maharashtra State Electricity Board	**Package No. II** -Construction of Gavhanphata Interchange (from Ch. 14.740 to Km 15.894 of NH-4B, Km. 13.160 to km. 14.880 of NH-348 (Old SH-54) and from Km. 5.360 to Km 6.785 of Amra Marg) and NH-4B (from 6.073 to Km. 14.740 and from Km. 15.894 to Km. 21.200 in the state of Maharashtra on EPC mode.	13.973	3980	200		
58	Nashik Thermal Power Plant - Maharashtra State Electricity Board	**PACKAGE-III-** Construction of NH-348 (Old SH-54) from Km-7.422 to Km 13.160) and Amra Marg (from Km -0.000 to Km-5.36) in the state of Maharashtra on EPC mode	11.098	3035	200		
59	Eklehare Thermal Power Plant, Nashik	NH-4B Navi Mumbai	10.562	200000	185	Sep-15	Flyash is being used by local consumers hence not available in plant in sufficient qty.
60	Dahanu Thermal Powr Plant, Dhanu	NH-4B Navi Mumbai	10.562	200000	165		
RO-Bangalore	Name: Shri R. K. Suryawanshi	Contact: 9686841639					
61	Bellary K.P.C.L.	Six laning of Davangere - Haveri section of NH-48 (old NH-4)	78.923	51000	208 Km	29.03.2017	Due to long distance fly ash is not being used as the transportation is too high rate and not-feasible.
PIU- Dharwad	Name: Col. A.K. Janbaz	Contact: 9945131911					
62	NTPC Kudgi Plant Karnataka	Six laning of Hubli-Haveri section of NH48	63.4Km	300000	230 Kms	Fly ash	-
63	Kudgi	Four laning of Hubli Hospet section of NH-63	143.721 Km.	36143	167	Fly ash	-
	Kudgi			6889610.4	167	pond ash	-

64	Udupi Power Corporation Limited (Adani)	Four Laning of Addahole (Near Gundya) (Existing Chainage Km 263+000, Design Chainage Km. 255+703) to Bantwal Cross (Existing Km 328+000, Design Chainage Km 318+755) Section of NH-75 (old NH-48) under NHDP Phase-IV on EPC mode in the state of Karnataka	63.052 Kms	54583	105 Kms	31.03.2016	1. The said estimated quantity of flyash shall be used in concreting activities. The cut quantity is exceeding the fill quantity in the subject project and due to space constraints to dispose the excess soil, we are constrained to use the flyash in flyover/VUP/structure approaches. 2. Apart from the above mentioned plant, NTPC Kudgi STPP, is located at a distance of 531 Kms from the project site. As the lead is far more than the stipulated 100 Kms lead through circular No. 24028/14/2018-H, Govt. of India, MORTH, S&R (P&B) Section dated August 27, 2018, the option has not been considered for purchasing.
PIU- Hospet		**Name: Shri K.N. Ajaymani**		**Contact: 9481353756**			
65	Bellary Thermal Power station-KPTCL	Four Laning of Hospet – Bellary - Karnataka / AP Border Section of NH-63 in the state of Karnataka under EPC Mode From Hospet (Design Ch 280+080) to Karnataka / AP Border (Design Ch 375+450)	95.37	1489264.385	29.00	31.03.2017	MoU is yet to be signed
RO-Nagpur		**Name: Shri M. Chandra Shekhar**		**Contact: 9096067685**			
66	Koradi Thermal Power station	Development of Multilane Carriageway from km. 704.200 to km. 723.000 (from Kanhan to Automotive Square) section of Urban link of Nagpur Kamptee Section of Nagpur Jabalpur Road of NH-44 to be executed on EPC Mode-	17.80	13825.95	15	21.05.2017	-
67	Koradi Thermal Power station	b) Construction of flyover from liberty cinema to mental Hospital from km. 0+400 to km. 2.600 on Nagpur-Obedullagunj Road of NH-69 in the State of Maharashtra through EPC Basis.	3.96	13377.7	20	21.05.2017	-
68	Bhusawal Thermal Power Station, MSEB, Deepnagar, Bhusawal, Maharashtra 425307	Four Laning of Chikhali-Tarsod (Package - II A) Section of NH-6 from Km 360.000 to Km 422.700 in the state of Maharashtra to be executed on Hybrid annuity Mode under NHDP Phase IV/NH 6	87.3	250000	64	04.11.2016 - LOA	-
69	Bhusawal Thermal Power Station, MSEB, Deepnagar, Bhusawal, Maharashtra 425308	Four Laning of Tarsod-Fagne (Package - II B) Section of NH-6 from Km 422.700 to 510.00 in the state of Maharashtra to be executed on Hybrid annuity Mode under NHDP Phase IV/NH 6	62.700	1000000	08 km. from site C.394+600	04.11.2016 - LOA	-

70	NTPC Mouda Dist. Nagpur	NH-361 Mahagaon - Yavatmal (Km.320+580 to Km.400.575) (Package-II)	79.995	12500	276	28.03.2017	-
71		NH-361 Yavatmal - Wardha (Km.400.575 to Km.465.500) (Package-III)	64.924	300000	203	28.03.2017	-
72		NH-361 Wardha - Butibori (Km.465.500 to Km.524.690) (Package-IV)	59.19	633500	81	28.03.2017	-
73	Reliance Thermal Power Plant Butibori	NH-361 Mahagaon - Yavatmal (Km.320+580 to Km.400.575) (Package-II)	79.995	12500	250	28.03.2017	-
74		NH-361 Yavatmal - Wardha (Km.400.575 to Km.465.500) (Package-III)	64.924	300000	177	28.03.2017	-
75		NH-361 Wardha - Butibori (Km.465.500 to Km.524.690) (Package-IV)	59.19	633500	55	28.03.2017	-
76	Uttam Galva Metalic Limited	NH-361 Mahagaon - Yavatmal (Km.320+580 to Km.400.575) (Package-II)	79.995	12500	126	28.03.2017	-
77		NH-361 Yavatmal - Wardha (Km.400.575 to Km.465.500) (Package-III)	64.924	300000	26	28.03.2017	-
78		NH-361 Wardha - Butibori (Km.465.500 to Km.524.690) (Package-IV)	59.19	633500	125	28.03.2017	-
79	GMR Warora Energy Limited Warora	ROB- Pimpalkutti on NH-07	0.7	3200	105	15.09.2017	-
	Koradi Thermal Power Piant, Koradi				195		-
	Chandrapur Thermal Power Station Chandrapur				115		-
	Reliance Thermal Power Plant Butibori				173		-
	NTPC Mouda Dist. Nagpur				225		-
80	Reliance Thermal Power Plant,Butibori	Four – Lane Stand Alone Ring Road/ Bypasses for Nagpur City, Package – I from Km 0+500 to Km 34+000.(Total Length – 33+500 Km) in the state of Maharashtra on BOT (Hybrid Annuity) Basis.	33.5	265101	26.3	31.03.2016	.....
81	Koradi Plant	Four Lane Stand Alone Ring Road/Bypasses for Nagpur City, Package-II from Km 34+000 To Km 62+035. (Total Length-28+035 Km) In The State of Maharashtra On BOT (Hybrid Annuity) Basis.	28.035	1008800	25 KM	31.03.2016	.....
82	Reliance Thermal Power Plant,Butibori	Construction of Fly-over at Butibori-MIDC T-junction from km 26.280 NH-44 (Old NH-7) in the State of Maharashtra to be executed on EPC Mode	1.69	27000	8	05.09.2018	.....
83	Reliance Thermal Power Plant,Butibori	Construction of Flyover at km 77.750 (Hinganghat-Nandgaon junction) on Nagpur-Hyderabad section of NH-44 in the State of Maharashtra on Engineering, Procurement & Construction (EPC mode).	1.14	19800	40	24.10.2018	.....

84	Reliance Thermal Plant, Butibori	Construction 4 lane Flyover on NH-6 integrated with ROB's & river bridge including approach ramps, service roads, footpath over RCC utility duct from Pardi Octroi Naka to Itwari (Ch. 544/665 to 548/065) & inner Ring Road from Manewada to Kalamna (Ch. 20/760 to 23/190), & from Rani Prajapati Square to Vaishno Devi Square (Ch.00/000 to 00/596) including RUB on L.C. No. 71, 72 & connecting inner ring road junction to APMC Kalamna market gate no. 1 & 2, Nagpur, Maharashtra on EPC Mode	7.133 Kms	25000	41	28.12.2015	.....
85	NTPC Thermal Plant, Mouda	Construction of Sakoli flyover from ch. 451/244 to 454/184 (2.94 kms) on NH-53 (Old NH-6) in the State of Maharashtra on EPC.	2.94 Kms	30000	60	29.03.2018	.....
86	NTPC Thermal Plant, Mouda	Construction of Lakhani Flyover from Ch. 469.920 to 473.420 (3.5 kms) on NH-53 (Old NH-6) in the State of Maharashtra on EPC mode.	3.5 Kms	30000	60	29.03.2018	.....
RO- Raipur	**Name: Shri B.L. Meena**	**Contact: 8003352233**					
87	NTPC, Sipat	4/6 Laning of Raipur-Simga of NH-200 (New NH 30) (Package-1) from Km 0+000 to Km 48+580, Section of Raipur-Bilaspur Road in the state of Chhattisgarh, under NHDP-IV on EPC basis	48.58 km	3,50,000 Cum			
88	NTPC, Sipat	Four Lanning of Raipur – Kodebad Section from 10.200 TO Km. 43.400 of NH-43 in the state of Chhattisgarh under NHDP Phase –IV on EPC Mode.	33.200 km	12 lakh Tonnes			
89	NTPC, Sipat	Four Lanning of Kodebod-Dhamtari Section from 43.400 TO Km. 82.209 of NH-43 in the state of Chhattisgarh under NHDP Phase –IV on EPC Mode	38.809 km	959359 Tonne			
90	NTPC, Sipat	4- laning of Simga -Sargaon of NH-200 from Km 48+580 to Km 96+026 section of Raipur-Bilaspur (Package-II) in the State of Chhattisgarh under NHDP IV on EPC Mode.	47.45 Km	8,600 Tonne			
91	NTPC, Sipat	4- lane with paved shoulder configuration of Bilaspur-Patrapali from (Km. 0+000 to Km.53+300) section of NH-111 (New NH-130) in the state of Chhattisgarh under Bharatmala on Hybrid Annuity Mode	53.39 Km	21,00,000 Tonne			

Urgent
NGT Matter

F.No.: HSM-11/59/2019-HSM
Government of India
Ministry of Environment, Forest and Climate Change
(HSM Division)

Indira Paryavaran Bhawan
Jal, 2nd Floor, HSM Division,
Jor Bhag, New Delhi – 110003

Dated: 2nd March, 2020

OFFICE MEMORANDUM

Sub: **Original Application Number 117 of 2014, 499 of 2014 in the matter of Shantanu Vs. Union of India & Ors. Anupam Raghav & Anr Vs Union of India & Ors. Sandplast (India) Ltd. Vs. MoEF&CC in the National Green Tribunal, Principal Bench, New Delhi - regarding**

This has reference to Original Application Number 117 of 2014, 499 of 2014 in the matter of Shantanu Vs. Union of India & Ors. Anupam Raghav & Anr Vs Union of India & Ors. Sandplast (India) Ltd. Vs. MoEF&CC in the National Green Tribunal, Principal Bench, New Delhi.

2. In this regard, a copy of NGT Order dated 12.02.2020 is attached for reference, wherein Hon'ble NGT has directed to furnish quarterly progress reports on implementation of recommendations of Expert Committee of NITI Aayog for enhanced utilisation of fly ash.

3. It is, therefore, requested that necessary action in compliance with the above orders may be taken. Action taken report may kindly be sent to this Ministry at the earliest.

(A N Singh)
Addl. Director (S) / Scientist 'E'

Encl.: As above

i. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001 (secy-power@nic.in; Phone : 23710271; 23711316)
ii. The Secretary, Ministry of Road Transport & Highways, Transport Bhawan, 1, Parliament Street, New Delhi-110001 (Secyroad@nic.in; 23714104)
iii. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi (secy.moc@nic.in; Phone 011-23384884)
iv. The Secretary, Ministry of Housing and Urban Affairs, Nirman Bhawan, Maulana Azad Road, New Delhi-110011. (secyurban@nic.in; Phone No. : 23062377).
v. The Chairman, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032. (ccb.cpcb@nic.in; Phone 22307233)
vi. The Chairman, National Thermal Power Corporation, NTPC Bhawan, SCOPE Complex, Institutional Area, Lodhi Road, New Delhi - 110003 (Email: ntpccc@ntpc.co.in; Phone: 24360100, 24387000, 24387001)
vii. The Chairman Cum Managing Director, National Highways Authority of India, G 5&6, Sector-10, Dwarka, New Delhi - 110 075 (25074100 & 25074200)

No. 43012/13/2017-CPAM
Government of India
Ministry of Coal
***

Shastri Bhawan, New Delhi,
Date: 6th November, 2019

OFFICE MEMORANDUM

Subject: Action Taken Report on the recommendations of the Expert Committee for enhanced utilisation of fly ash in various sectors viz. mines, roads, bricks manufacturing, cement manufacturing etc

The undersigned is directed to refer to MoEF&CC's D.O. No. 09.02.2018-HSM dated 23.09.2019 on the above mentioned subject and to enclose herewith this Ministry's comments for information and necessary action.

Encl.: As Above.

(Hitlar Singh)
Under Secretary to the Government of India
Email Id: uscrc.moc@nic.in

To

Secretary,
Ministry of Environment, Forest and Climate Change
Prithvi Wing, Indira Paryavaran Bhawan
Jorbagh Road,
New Delhi -110003

POINT NO .1

Ministry of Coal should identify list of abandoned mines for utilization of fly ash in mines backfilling

Reply:

List of abandoned mines for mine backfilling has been sent to MoEF&CC vide OM No. 43012/13/2017-CPAM dated 20.05.2019 that includes following mines of CIL:

1. SECL: Bisrampur OC and Dugga OC
2. MCL: South Balanda Mine
3. NCL : Gorbi OC
4. WCL: Naveen Kunada OC; Telwasa OC and Dhorwasa OC

Reply on point no ii.

The Task Force constituted vide O.M. dated 29th September, 2011 of Ministry of Power comprising representatives of CIMFR, CMPDI, DGMS, etc. for taking up pilot project for utilisation of fly ash in operational mines should be revitalized and additional members representing Ministry of Mines and State Pollution Control Boards should be included in the aforesaid Task Force. The Task Force could meet quarterly to review and update the list of operational mines or abandoned mines/quarries. Backfilling should be started on the existing list of abandoned mines/quarries that have already been examined and recommended by the Task Force.

Task Force has held meetings in this regard. No further input from MoC.

Point no. iii.

Ministry of Coal should expedite the permission of Jingurda mine of NCL, Gevra & Dipika Mines of SECL, Kaniha mine of MCL, for fly ash backfilling/stowing.

Reply :.

CIL has communicated that Gevra, Dipka OC , Kaniha OC of MCL and Jhigurda OC of MCL are operational Mines & cannot be allowed for fly ash filling due to safety and other operational reasons. The same has already been communicated to MoEF&CC vide OM No. 43012/13/2017-CPAM dated 20.05.2019

Point No. iv.

It is reported that fly ash is being used for mines backfilling in some mines. Mining companies should share their experiences of mine backfilling to enhance fly ash utilization in this sector.

Reply: Noted.

No.43012/13/2017-CPAM/SDC
Government of India
Ministry of Coal

Shastri Bhawan, New delhi
Date: April,2020

Office Memorandum

Subject**:** Action Taken Report on the recommendations of the Expert Committee for enhanced utilisation of fly ash in various sectors viz. mines, roads, bricks manufacturing, cement manufacturing, etc.

The undersigned is directed to refer to MoEF&CC's D.O. No. 11/59/2019-HSM dated 02.03.2020 on the above mentioned subject and to submit the following ATR on the Expert Committee's recommendations pertaining to Ministry of Coal for kind information:

Sl. No.	Recommendations	ATR
1	Identification of list of abandoned mines	List of abandoned mines identified by CIL and SCCL is enclosed as Annexure-I.
2	Regarding functioning of Task force of Ministry of Power	Same as submitted earlier vide MoC's letter dated 06.11.2019.
3	Regarding allowing ash filling in some of the operating mines	Same as submitted earlier vide MoC's letter dated 06.11.2019.
4	Regarding sharing of ash filling experience by CIL mines	Enclosed as Annexure-II.

Encl: As above

Signature Not Verified
Digitally signed by AJITESH KUMAR
Date: 2020.04.08 00:00:01 IST

(**Ajitesh Kumar**)
Deputy Secretary to the Govt. of India.

To,

Shri A N Singh
Addl. Director (S)/Scientist 'E', HSM Division
Ministry of Environment, Forest and Climate Change
Indira Paryavaran Bhawan, New Delhi

266630/2020/HSM

List of mines identified for fly ash filling in CIL & SCCL										Annexure-I
S. N.	**Company**	**Admin. Areas**	**Name of Mine**	**OC/UG**	**Distt. And State**	**Area of OC void (Ha.)**	**Volume of ash that may be accommodated (Approximate) (Lakh Cum.)**	**Nearby TPP's**	**Distance from TPP's (kms.)**	**Availability of Transport infra**
1	WCL	Majri	Telwasa OC	OC	CHANDRAPUR(MH)	80.13	200	GMR power, Warora, SaiWardha Power, Warora	39	Road
2		Majri	Dhorwasa OC	OC	CHANDRAPUR(MH)	51.75	100		39	
3		Majri	NavinKunada OC	OC	CHANDRAPUR(MH)	82.6	250		37	
4	SECL	Korba	Manikpur west OC	OC	Korba/C.G	74	210	NTPC & CSPGCL (MoU Signed with NTPC).	20-30	Road
5		Korba	Surakachhar 3&4 pit	UG	Korba/C.G	0	3.3 (1.5 filled up)	NTPC (MoU signed)	20-30	Road
6		Bhatgaon	Dugga	OC	Surajpur/C.G	25	170	NTPC,Korba	250	Road
7		Bishrampur	Bishrampur	OC	Surajpur/C.G	9	17	NTPC, Korba	250	Road
8		Sohagpur	ShardaOC (OPQR & Trench T-1 patch)	OC	Shahdol-Anuppur/M.P	6.0 & 9.0	10.0 & 30.0	ATPS	10	Road
9	NCL	Block-B	Gorbi	OC	Singrauli,MP	26	14	NTPC (MoU signed)	35	Road
10	MCL	Jaganath	South Balanda (Q-2 & Q-3)	OC	Angul, Odhisa	63	147.3 (95 % filled up)	NTPC (Ongoing)	10	Pipeline
11			Jaganath OC, Q-IV	OC		36	170 (3 % filled up)	Bhusan steel (Stopped since Feb-2016 -no permits)	20	EC for pipeline
12			Jaganath OC, Quarry VI & VII	OC		29 & 16= 45.0	64.3 & 39.6 =103.90	NTPC (MoU in process)	10	
13			Jaganath OC, Q-VIII	OC		34.326	178.2	NTPC (MoU in process)	22	
14			South Balanda (Q-1)	OC		20	39.7 (7 L Cu.m filled)	NBVL (Stopped since 2013 - no EC)	10	Road

List of mines identified for fly ash filling in CIL & SCCL										Annexure-I
15		Bharatpur	Bharatpur	OC		90.53	133	NALCO (laying of pipe line in process	12	Pipeline
S. N.	**Company**	**Admin. Areas**	**Name of Mine**	**OC/UG**	**Distt. And State**	**Area of OC void (Ha.)**	**Volume of ash that may be accommodated (Approximate) (Lakh Cum.)**	**Nearby TPP's**	**Distance from TPP's (kms.)**	**Availability of Transport infra**
16	ECL	Mugma	Bajna/ Pusai	OC	Dhanbad,Jharkhand	6	12	MPL,Maithon	10	Road
17	ECL	Satgram	Nimcha	OC	PaschimBardhaman, W.B	25	50	DTPS, Durgapur / MTPS, Mejia	23	Road
18	CCL	Kathara	Govindpur	UG	Bokaro/Jharkhand		0.85 (Bottom ash)	DVC/STPS	10	Road
19		NK	Dakra (To be available in 2023-24)	OC	Ranchi/Jhrkhand	38.5	214.5	Patratu	45	Road
20	BCCL	WJA	Murulidih (Cluster-XIII)	OC	Dhanbad - Jharkhand	1.6	1.5	CTPP	25	Road
21	SCCL	RG-1	Medapalli OCP (To be closed in 2022-23)	OC	Peddapalli, Telangana	258.31	2164.3	NTPC (Under construction)	5	Road

Annexure-II

Experience on Fly ash filling in CIL mines

The Fly Ash Notification, 2009 provides for use of fly ash in UG mines as stowing material and in OC mines in OB dumps and in internal dumps. In operational mines, it is not possible to use fly ash in dumps due to safety and environmental considerations. CIL, is therefore not using fly ash in operating mines. This issue has also been brought to MoEFCC several times.

However, in past some abandoned mines had been offered by Mahanadi Coalfields Limited (MCL), a subsidiaries of CIL to nearby TPPs for fly ash disposal through MoU route. As per MoU, the conveyance of fly ash, safety and environmental concerns of fly ash disposal, obtaining environmental permission and approval of DGMS etc. was the sole responsibility of the TPPs. In addition, monitoring of the surrounding environment is also undertaken by TPPs.

1. Experience of MCL

MCL entered into MoUs with three nearby TPPs for fly ash backfilling in following three abandoned voids in which TPPs had commenced fly ash backfilling after obtaining various statutory permissions:

Sl. No	Name of Mine	Volume (Lakh Cu.m)	Name of TPPs	Remarks, if any
2	South Balanda Q- 2&3	147.30	TTPS (NTPC)	MoU signed in 2004. Till Feb-2020, 13.99 M.cum filled and backfilling is continuing.
3	South Balanda Q- 1	39.70	NBVL	MoU signed in 2007. Filled 0.706 M.cum of volume. Filling discontinued since Dec, 2013 on account of non-availability of EC.
4	Jagannath Q-IV	170.00	Bhushan Steel	MoU signed in 2010. Filled 0.558 M.cum of volume. Filling discontinued since Feb, 2016 due to no permission for ash transportation. As per MoU,Bhushan Steel was charged for ash filling @ Rs 2.71 per cum.

1.1 Obtaining statutory clearances by Fly ash disposal companies

EC from MoEF, Permission from DGMS & Consent to Operate from SPCB had been obtained by the Fly ash disposal companies. Scientific studies were carried out by the user agency.

The EC proposal was considered on several occasions both by EAC (Thermal) & by EAC (Coal). Initially the EC for the proposal for fly ash approval was given for one year period only & was further allowed for one year period on two occasions after appraisal by EAC before granting for a period of five years.

User agency had to obtain permission from DGMS regarding exemption from applicability of Mines Act-1952 for such type of operation under Sec-83 of Mines Act and any other safety issues during the operation.

1.2 User agency was responsible for complying all terms and conditions prescribed in the various permits obtained for fly ash filling, which included monitoring of environmental parameters and carrying out specific scientific studies by the specialized agencies.

1.3 Environmentalstudies carried out by NTPC to assess the adverse impact of ash filling

Ash Characterization and Leachate Study

Ash Characterization and Leachate Study was undertaken by CMPDIL, Ranchi for ash generated from NTPC Power Plants. The findings/suggestions were:

- Toxicity characteristic leaching procedure (TCLP) test carried out for the drilling samples in August 2015 showed that the ash samples were **non-hazardous** in nature as per guidelines of Resource Conservation and Recovery Act (the law that regulates the management of hazardous & non-hazardous solid waste). Similar results were obtained in the TCLP tests carried out in March 2013 and earlier in 2003.

- As per the results obtained from various leachate tests (Water extraction tests and Water elution tests), the leaching of metals may occur only under extremely acidic conditions in laboratory. Under normal environmental conditions, the leaching of the heavy metals and trace elements is insignificant. This explains the low concentration of trace elements in the Supernatant.

Hydro-geological study

The hydro-geological investigation was carried out to establish hydro-geological characteristics and evaluate ground water table and water quality in and around the exhausted mine voids.Study was done by RI-VII, CMPDI, Bhubaneswar.The findings/suggestions were:

- The hydraulic conductivity measurements indicate that the ash column at the Mine void has very poor permeability. **Besides, the drilling data at the Mine Voids support the presence of clay and coal seam below the ash column.** The presence of the underlying impermeable clay along with the poor permeable ash column retards the movement of the toxic trace elements to the underlying aquifers. This explains the low concentration of trace elements in the ground water.

- The Geophysical soundings also indicate low resistivity formations which can be attributed to the clay content in the top 10 m - 15 m as well as below.

Hydro-chemical study

Quality of ground Water/ Surface Water/ Mine Water was studied by NEERI, Nagpur.The comprehensive analysis of the water chemistry of sources in the vicinity of the Mine Void, Piezometer and the Supernatant indicate that no systematic increase in the concentration of trace elements like As, Pb and Hg is observed.

Conclusion

The results of all the studies indicate that the disposal of ash from Talcher TPS in the voids of South Balanda Mine has no adverse impact on ground water quality. The poor permeability of the ash deposits in the Mine void prevents movement of ash water into the adjoining aquifers and prevents ground water contamination. In the present case, the presence of underlying clay formation further prevents movement of ash water into ground water.

1.3 Safety issues

Till now there has been no issues of safety during ash filling in MCL.

1.4 Villager's complaints

- There was an issue of over flow of water into open fields; this was overcome by establishing settling pond.

- There are incidents of pipe leakages during transportation of ash slurry, for which TTPS (NTPC) compensated the victims.

- Disturbances by villagers were occurred during pipe line laying work for ash filling in Bharatpur South Quarry void, which were negotiated by NALCO.

1.5 Other aspects

As long as the dumped fly ash is covered with water there is no issue of air pollution but the fly ash becomes air borne when the water dries up.

As per MoU, NBVL has developed a park in Balanda leasehold over an area of 0.3 Ha in December 2017and in the process to hand over it to MCL.

Some of the Subsidiaries pointed out the presence of heavy metal in the water bodies in the vicinity of ash filling sites.

1.6 Some specific Points of MoU

In addition to various terms and conditions relating to safety, environment, legal aspects, in the MoU, following are some specific provisions relating to fly ash filling:

- The user agency will pay for the rate of ash filling into the mine void/any other dues, to be decided by MCL. However, in case of NBVL, instead of payment of charges for utilizing mine void, NBVL was asked to develop a park at South Balanda.

- The user agency shall reimburse all expenditure including any legal charges on any matter of ash filing or any litigation, orders of government and orders of regulatory authority. This liability will operate even after termination of this MoU for 4 years and indefinitely thereafter, if any litigation commences within 4 years and continues beyond that till all litigation ceases.

2. Upcoming Ash Filling project in NCL

MoU has been signed between NCL and NTPC, VSTPS on 03.01.2019 for filling of fly ash in to Gorbi Mines of NCL under certain conditions.

As per MoU, NCL have to take permission from DGMS for fly ash filling and NTPC have to take other studies mentioned in the MoU like Hydrogeology and EIA study, Flora & fauna study and Radiotracers study and permission from MoEF and SPCB.

For DGMS permission Standard Operating Procedure (SOP) was submitted to DMS-Varanasi on 11.10.2019.DMS desired some additional information from NTPC –VSTPP relating to safety:

- Appointment of "**Deemed Agent**" as required vide Regulation 07 of CMR-2017.
- Safety Management Plan (SMP) based on scientific study (being carried out by CMPDI).
- Traffic Rules applicable to mine area, appointment of Engineer, Authorization of competent persons working at or near the mine, checking safety features in deployed vehicles, fencing & barriers etc.

Scientific Study reports from NTPC still awaited. Statutory permission from MPPCB by NTPC is still awaited.

3. Some Suggestions by CIL for future ash filling projects

- Submission of BG by TPP as security money against safety aspects and Mine closure issues.
- Fly ash filling has to be incorporated in the mine plan/ mine closure plan.
- The legal framework of fly ash disposal, environmental clearance (including Public Hearing), monitoring of the long term fate of the impact and accountability of the impact needs to be clearly addressed.
- Unless the mine is transferred to TPP, DGMS will hold the mine officials responsible for safety of the operation. TPPs will get permissions from DGMS and shall be responsible for safety of the operation.Legal aspects regarding transferof mine ownership under CB Act will have to be examined.
- In case of road transport, provision of separate road may be made for safety.

****

No. CPAM/43012/13/2017-CPAM
Government of India
Ministry of Coal
(SDC Section)

New Delhi, the 3rd September, 2020

Office Memorandum

Subject:	NGT's Order passed on 11/02/2020 in OA. No.117,102 499 of 2014 - for Action Plans – To List on 8/9/2020

The undersigned is directed to refer to email dated 01.09.2020 received from NGT regarding order dated 27/01/2020 passed in OA. No.117/2014 Titled Shantanu Sharma Versus Union of India for necessary action. Next date of hearing is scheduled on 08.09.2020.

It is observed that none of the directions made in the above mentioned order is directly actionable on part of Ministry of Coal (MoC). However, the following two directions involve inputs of MoC to concerned Ministries (MoP and MoEF&CC):

- Para-32 (e): Task Force of Ministry of Power and Ministry of Coal may recommend list of abandoned mines/quarries for mine back filling purposes to the CPCB. CPCB may notify the same accordingly for use by the TPPs as per applicable guidelines and permission from State PCBs/PCCs.

- Para- 32 (i) : A joint Committee comprising of MoEF&CC, CPCB, IIT Roorkee and any other member considered necessary may submit quarterly progress report on recommendations of Expert Committee of Niti Aayog for enhanced utilization of fly ash in various sectors: mines, roads, cement, industries and bricks etc., along with its implementation status.

As regards inputs to the Task Force of MoP [Para-32 (e)], the list of 21 nos. of abandoned coal mines identified by the coal companies for fly ash back-filling has already been shared with the MoP and with the Task Force. As communicated by CIL, n**o new abandoned coal mine has been added to the list.**

For compliance of Para-32 (i) by the Joint Committee, MoEF&CC, ATR

on Expert committee's recommendations, which are relevant to MoC, are as under:

Sl.	Recommendations	ATR
1.	Identification of list of abandoned mines	No new abandoned mine has been added to the list shared with MoEF&CC vide MoC's letter dated 08.04.2020.
2.	Regarding functioning of Task force of Ministry of Power	MoC participated in various meetings convened by Task Force of Ministry of Power and submitted its inputs on the subject.
3.	Regarding allowing ash filling in some of the operating mines	Same as submitted earlier to MoEF&CC vide MoC's letter dated 06.11.2019.
4.	Regarding sharing of ash filling experience by CIL mines	Already shared with MoEF&CC vide MoC's letter dated 08.04.2020

In view of the above facts and circumstances, MoP and MoEF&CC is requested to do the needful during the NGT's scheduled hearing on 08.09.2020 and while doing so, the interest of the Ministry of Coal may also be protected.

This issues with the approval of the Competent Authority.

(Mukesh)
Under Secretary to the Govt. of India.

To,

1. The Secretary,
Ministry of Environment, Forest and Climate Change,
Indira Paryavaran Bhawan, Jor Bagh,
New Delhi- 110003

2. The Secretary,
Ministry of Power,
Shram Shakti Bhawan,
New Delhi- 110003

285077/2020/HSM

Email **aditya.narayan@nic.in**

Urgent : Reminder: Original Application Number 117 of 2014, 499 of 2014 in the matter of Shantanu Vs. Union of India & Ors. Anupam Raghav & Anr Vs Union of India & Ors. Sandplast (India) Ltd. Vs. MoEF&CC in the National Green Tribunal, Principal Bench, New Delhi - regarding

From : Aditya Narayan Singh <aditya.narayan@nic.in> Tue, Jul 07, 2020 01:53 PM

Subject : Urgent : Reminder: Original Application Number 117 of 2014, 499 of 2014 in the matter of Shantanu Vs. Union of India & Ors. Anupam Raghav & Anr Vs Union of India & Ors. Sandplast (India) Ltd. Vs. MoEF&CC in the National Green Tribunal, Principal Bench, New Delhi - regarding

1 attachment

To : Secretary Power <secy-power@nic.in>, Secyroad@nic.in, DURGA SHANKER MISHRA <secyurban@nic.in>, ccb.cpcb <ccb.cpcb@nic.in>, ntpccc@ntpc.co.in, ajaysabharwall@nhai.org, CMD NTPC <cmd@ntpc.co.in>, chairman@nhai.org, Nazimuddin <nazim.cpcb@nic.in>, Member Secretary CPCB <mscb.cpcb@nic.in>

Cc : Dharmendra Kumar Gupta <gupta.dharmendra@gov.in>

Reminder
Urgent
NGT Matter

F.No.: HSM-11/59/2019-HSM
Government of India
Ministry of Environment, Forest and Climate Change
(HSM Division)

Indira Paryavaran Bhawan
Jal, 2nd Floor, HSM Division,
Jor Bhag, New Delhi – 110003

Dated: 7th July, 2020

OFFICE MEMORANDUM

Sub: Original Application Number 117 of 2014, 499 of 2014 in the matter of Shantanu Vs. Union of India & Ors. Anupam Raghav & Anr Vs Union of India & Ors. Sandplast (India) Ltd. Vs. MoEF&CC in the National Green Tribunal, Principal Bench, New Delhi - regarding

This has reference to this Ministry's OM dated 2.3.2020 regarding the above cited subject, enclosing a copy of NGT Order dated 12.02.2020 (copy enclosed), wherein Hon'ble NGT has directed to furnish quarterly progress reports on implementation of recommendations of Expert Committee of NITI Aayog for enhanced utilisation of fly ash.

285077/2020/HSM

2. However, no quarterly progress report in this regard has been received from your Ministry/Department. **Next date of hearing is fixed on 8.7.2020**.

3. It is, therefore, requested that action taken report may kindly be sent to this Ministry at the earliest.

(A N Singh)
Addl. Director (S) / Scientist 'E'

Encl.: As above

i. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001 (secy-power@nic.in; Phone : 23710271; 23711316)

ii. The Secretary, Ministry of Road Transport & Highways, Transport Bhawan, 1, Parliament Street, New Delhi-110001 (Secyroad@nic.in; 23714104)

iii. The Secretary, Ministry of Housing and Urban Affairs, Nirman Bhawan, Maulana Azad Road, New Delhi-110011. (secyurban@nic.in; Phone No. : 23062377).

iv. The Chairman, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032. (ccb.cpcb@nic.in; Phone 22307233)

v. The Chairman, National Thermal Power Corporation, NTPC Bhawan, SCOPE Complex, Institutional Area, Lodhi Road, New Delhi - 110003 (Email: ntpccc@ntpc.co.in; Phone: 24360100, 24387000, 24387001)

vi. The Chairman Cum Managing Director, National Highways Authority of India, G 5&6, Sector-10, Dwarka, New Delhi - 110 075 (25074100 & 25074200)

From: "Aditya Narayan Singh" <aditya.narayan@nic.in>
To: "Secretary Power" <secy-power@nic.in>, Secyroad@nic.in, "Secretary Ministry of Coal" <secy.moc@nic.in>, "DURGA SHANKER MISHRA" <secyurban@nic.in>, "ccb.cpcb" <ccb.cpcb@nic.in>, "Member Secretary CPCB" <mscb.cpcb@nic.in>, ntpccc@ntpc.co.in, "Sanjeev Kumar Kassi" <sanjeev_kassi@nic.in>, "Director T MoC" <dirtech.moc@nic.in>, "Nazimuddin" <nazim.cpcb@nic.in>
Cc: "Dharmendra Kumar Gupta" <gupta.dharmendra@gov.in>, "AANYA SHROTRIYA" <aanya.shrotriya@gov.in>, "Aanya Shrotriya" <aanya1608@gmail.com>
Sent: Monday, March 2, 2020 11:21:53 AM
Subject: Original Application Number 117 of 2014, 499 of 2014 in the matter of Shantanu Vs. Union of India & Ors. Anupam Raghav & Anr Vs Union of India & Ors. Sandplast (India) Ltd. Vs. MoEF&CC in the National Green Tribunal, Principal Bench, New Delhi - regarding

Urgent
NGT Matter

F.No.: HSM-11/59/2019-HSM
Government of India
Ministry of Environment, Forest and Climate Change
(HSM Division)

Indira Paryavaran Bhawan
Jal, 2nd Floor, HSM Division,
Jor Bhag, New Delhi – 110003

285077/2020/HSM

Dated: 2nd March, 2020

OFFICE MEMORANDUM

Sub: **Original Application Number 117 of 2014, 499 of 2014 in the matter of Shantanu Vs. Union of India & Ors. Anupam Raghav & Anr Vs Union of India & Ors. Sandplast (India) Ltd. Vs. MoEF&CC in the National Green Tribunal, Principal Bench, New Delhi - regarding**

This has reference to Original Application Number 117 of 2014, 499 of 2014 in the matter of Shantanu Vs. Union of India & Ors. Anupam Raghav & Anr Vs Union of India & Ors. Sandplast (India) Ltd. Vs. MoEF&CC in the National Green Tribunal, Principal Bench, New Delhi.

2. In this regard, a copy of NGT Order dated 12.02.2020 is attached for reference, wherein Hon'ble NGT has directed to furnish quarterly progress reports on implementation of recommendations of Expert Committee of NITI Aayog for enhanced utilisation of fly ash.

3. It is, therefore, requested that necessary action in compliance with the above orders may be taken. Action taken report may kindly be sent to this Ministry at the earliest.

(A N Singh)
Addl. Director (S) / Scientist 'E'

Encl.: As above

i. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001 (secy-power@nic.in; Phone : 23710271; 23711316)

ii. The Secretary, Ministry of Road Transport & Highways, Transport Bhawan, 1, Parliament Street, New Delhi-110001 (Secyroad@nic.in; 23714104)

iii. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi (secy.moc@nic.in; Phone 011-23384884)

iv. The Secretary, Ministry of Housing and Urban Affairs, Nirman Bhawan, Maulana Azad Road, New Delhi-110011. (secyurban@nic.in; Phone No. : 23062377).

v. The Chairman, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032. (ccb.cpcb@nic.in; Phone 22307233)

vi. The Chairman, National Thermal Power Corporation, NTPC Bhawan, SCOPE Complex, Institutional Area, Lodhi Road, New Delhi - 110003 (Email: ntpccc@ntpc.co.in; Phone: 24360100, 24387000, 24387001)

vii. The Chairman Cum Managing Director, National Highways Authority of India, G 5&6, Sector-10, Dwarka, New Delhi - 110 075 (25074100 & 25074200)

Shantanu Sharma(OA no 117 of 2014)11 Feb 2020 order.pdf
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