

F. No. 11/3/2018- HSMD
Government of India
Ministry of Environment, Forest & Climate Change
(HSM Division)

Indira Paryavaran Bhawan
Jor Bag Road, Aliganj
New Delhi – 110003

Dated: 8th June, 2023

OFFICE MEMORANDUM

Sub.: Minutes of the third meeting of 'Fly Ash Management and Utilization Mission' held on 01.05.2023 - reg.


The undersigned is directed to enclose herewith the minutes of the third meeting of "Fly Ash Management and Utilization Mission" held under the Chairpersonship of Secretary (EF&CC) on 01.05.2023 at 11:00 hrs at Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, New Delhi.

2. It is requested to furnish the action taken report to Central Pollution Control Board.

This issues with the approval of the Competent Authority

Encl.: as above

Yours sincerely,


(Dr. Satyendra Kumar)
Director
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To:

1. Secretary (Coal), Ministry of Coal, New Delhi
2. Secretary (Power), Ministry of Power, New Delhi
3. Secretary (Mines), Ministry of Mines, New Delhi
4. Chief Secretary, State of Uttar Pradesh
5. Chief Secretary, State of Madhya Pradesh
6. Chairman, CPCB, New Delhi
7. Additional Chief Secretary/Principal Secretary, Energy, Government of Uttar Pradesh

8. Additional Chief Secretary/Principal Secretary, Energy, Government of Madhya Pradesh
9. Additional Chief Secretary/Principal Secretary, Industries, Government of Uttar Pradesh
10. Additional Chief Secretary/Principal Secretary, Industries, Government of Madhya Pradesh
11. Director General, Directorate General of Mines Safety, Jharkhand
12. Additional Chief Secretary/Principal Secretary, Environment Department, Government of Madhya Pradesh
13. Additional Chief Secretary/Principal Secretary, Environment Department, Government of Uttar Pradesh
14. Chairman, UPPCB, Uttar Pradesh
15. Chairman, MPPCB, Madhya Pradesh
16. District Magistrate, Sonbhadra, U.P. (for stone crushers and all private mines)
17. District Magistrate, Singrauli, M.P. (for stone crushers and all private mines)
18. CMD, M/s NTPC Limited
19. CMD, M/s Lanco Anpara Power Pvt. Ltd.
20. CMD, M/s Hindalco Industries Ltd.
21. CMD, M/s UPRVUNL
22. CMD, M/s Grasim Industries Limited, Chemical Division, Renukoot, Sonbhadra
23. CMD, M/s Birla Carbon India Pvt. Ltd., Renukoot, Sonbhadra

Copy to:-

1. PPS to Secretary (EF&CC)
2. PPS to AS(NPG)
3. Guard File

**Minutes of the meeting of Fly Ash Management and Utilization Mission
held on 01.05.2023 at 11:00 hrs**

The third meeting on 'Ash Management and Utilization Mission' was convened on 1st May, 2023 at 11:00 hrs to review the status of actions taken based on the recommendations of the Mission established in the meeting held on 31.01.2023. The list of participants is annexed at **Annexure I**.

(a) During the meeting, **following discussions were held:**

1. Ash generation and utilization by all TPPs in the country was reviewed. 186 TPPs (2,11,620 MW) generated 262.6 million tonnes during FY 2021-22. Overall ash utilization in the country was 94.7%. The details of ash utilization by TPPs are as below:
 - i. 80 % (1st compliance cycle of 3 years): 144 TPPs
 - ii. 60-80 % (1st compliance cycle of 4 years): 21 TPPs
 - iii. <60 % (1st compliance cycle of 5 years): 38 TPPs
 - 12 TPPs: non-operational; 01 TPP: data not received
2. Ash utilization percentage of various thermal power plants in Singrauli and Sonbhadra region was reviewed. The region generated 29.3 MT during FY 2022-23 and utilized 14.13 MT (48%). The details of ash utilization during FY 2021-22 & 2022-23 are as under:
 - i. Nigrie, JP Associates: 89.55% & 100.8%
 - ii. M/s Sasan TPS: 52.3% & 109.4%
 - iii. M/s Mahan Energen TPS: 25.46% & 100%
 - iv. M/s NTPC Vindhyanchal: 53% & 37.31 %
 - v. M/s Singrauli: 57.5% & 40.16%
 - vi. Rihand: 59.2% & 52.9%
 - vii. Anpara A, B & D, UPVUNL: 2.62% & 1.89%
 - viii. Obra B, UPVUNL: 5.4% & 15.34%
 - ix. Anpara 'C' Lanco TPS: 12.8% & 11.67%

3. M/s Vindhyanchal informed that tender for supplying ash for road construction projects was under process. It was informed that despite the allotment of the Gorbi mine to the power plant, infrastructure development for ash disposal was still in progress.
4. Action plans of stone crushers from Govt. of M.P. were received. Field inspections were carried out by a team of District Collector, SPCB and Mining Officers. Principal Secretary, Environment Dept. Govt. of M.P. reviewed the progress of implementation of action plans on 25.04.2023. Out of 63 stone crushers, the following have installed one or other pollution control measures:
 - 23: dust containment cum suppress system
 - 24: wind breaking wall
 - 60: water sprinkling
 - 43: greenbelt
5. The crushers located in M.P. were directed to install the remaining pollution control measures within three months.
6. Action Plans of stone crushers from U.P. (Sonbhadra District) were submitted on 21.04.2023. Around 200 stone crushers of large capacities are located at single location, causing air pollution in the region. Govt. of U.P. informed that seven defaulters out of 220 stone crushers had been closed and monitoring of air quality is carried out on weekly basis.
7. Oversight Committees of U.P. and M.P. comprising officials from CPCB, SPCB and District Magistrate had carried out field inspections in February, 2023. CPCB forwarded the inspection reports of UPPCB and MPPCB for taking action on violations on 20.02.2023.
8. Principal Secretary, Deptt. Of Environment, Govt. of M.P. reviewed overall progress of actions mandated under the Mission on 25.04.2023 and issued following directions:
 - a. Vindhyanchal TPP, Sasan Power, Mahan Energen, M/s Hindalco, M/s JP Nigrie, were given directions and timelines to install pollution control measures and achieve 100% ash utilisation.

- b. Northern Coalfields Ltd. directed to conduct feasibility study for mixing of ash in OB dumps and backfilling of ash in voids of working mines.
 - c. Coal mines were mandated to procure mechanical sweepers, fog and mist sprinklers for taking up dust mitigation measures.
 - d. Coal mines were directed to set up coal handling plant and railway siding for evacuation of coal through rail to match to the expanded production capacities.
 - e. Jayant, Dudhichua and Nigahi coal mines were issued notices for taking dust pollution control measures for avoiding contamination of water bodies. Notices served to impose environmental compensation.
 - f. Suliyari open cast mine, Amelia coal mine, Mohar and Mohar Amlori coal mine and Amelia north coal mine were directed to set-up concrete roads and procure mechanical sweepers and water sprinkling machines for control of air pollution.
 - g. 8 railway sidings (ECR-3, WCR-3 and NCL-2) were directed for ensuring installation of air pollution control measures.
 - h. PWD was directed to inspect the construction of roads for control of air pollution.
9. Obra TPS had discharged ash into nearby nalla and M/s Anpara TPS had discharged ash into Rihand reservoir from the ash ponds. MPPCB imposed Environmental Compensation on UPRUVNL. The company informed that 51000 m³ of ash from the nalla near to Obra TPS and 66000 m³ of ash from Rihand reservoir had been desilted so far. The desilted ash had been used for filling up of low lying areas.
10. Central Level Working Group constituted under Additional Secretary, Ministry of Coal for allocation of coal mines for disposal of ash convened a meeting on 31.03.2023, and decided that further scientific studies for allocation of working mines for disposal of ash is not required in operational mines in view of safety issues.
11. Studies conducted by CIMFR have shown that backfilling of ash in Gare Palma IV (working mine) providing good results since 15 years and suggested that

similar study may be conducted on mine-to-mine basis. Further, Sasan coal mine has conducted a study regarding mixing of OB with ash and have shown favourable results.

12. NCL has initiated studies to be conducted by CIMFR in operational mines and the reports will be submitted by December, 2023.
13. Ministry of Coal has provided the status of identification of mines for backfilling of ash in mine voids:
 - a. 32 abandoned mines identified
 - Ash filling is ongoing/ completed: 10 mines
 - MoU is in process: 02 mines
 - Identified: 09 mines
 - b. 18 Underground (UG) coal mines of CIL
 - c. 01 Opencast mine and 09 UG mines of SCCL (100 lakh m³ bottom ash is expected to be utilized)
14. Ministry of Mines has identified 82 abandoned mines (other than coal) for filling mine voids with ash.
15. M/s Anpara, UPVUNL has requested NCL and Ministry of Coal to allot pit no. 3 of Gorbi mine for disposal of ash. NCL informed that the proposal will be submitted for Board's approval. Ministry of Coal has informed that Pit no.3 of Gorbi mine will be allocated once all statutory requirements have been met by the respective TPP.
16. NTPC mentioned that TPPs may be notified regarding the closure of the mines in advance as it takes approximately 4-5 years for infrastructure development for transportation and disposal in mine voids.
17. M/s Hindalco informed that signing of MoU between DFO, U.P, Aluminium Association of India and IIFM Bhopal is under process for backfilling of Dala abandoned stone quarry with fly ash and red mud. Request made to NCL to allot one pit of Gorbi mine for filling it with red mud and fly ash.

18. NH39 from Sidhi to Waidhan, Singrauli for about 92 km is constructed by NHAI in M.P. It was requested that ash may be utilized in the said road construction project.
19. Committee of Implementation of Ash Utilization Notification, 2021 and Committee for identification of mines under chairpersonship of Chairman, CPCB convened meeting on 18.02.2023 and Ministry of Coal was requested to update the status of allocation and initiation of backfilling, list out mines likely to be available and undertake mine (operational) specific studies for disposal of ash.
20. CPCB has identified organizations for annual certification of ash dykes in line with Ash Utilization Notification, 2021. Certification of ash dykes of thermal power plants located at Singrauli district have been done during the month of February, 2023.
21. M/o Power issued show-cause notice to 43 TPPs (37 TPP were having less than 60% of ash utilization and 06 TPPs having 60-80% ash utilization percentage). MPPCB and UPPCB issued notices to coal mines for imposing Environmental Compensation for non-compliances and no response was received from the respective Coal mine.
22. MPPGCL made several requests for allotment of abandoned mines of SECL for utilizing ash from Amarkantak TPS, Chachai for backfilling of mine voids with ash. It was informed that SECL is not allotting the said mine voids as it has been transformed into a water body.
23. Respective Committee of MoEFCC, CPCB and SPCBs constituted as per the directions of NGT in O.A. No. 862 of 2022 regarding pollution due to road transportation of ash of thermal power plants in Singrauli and Sonbhadra region carried out field inspections and submitted the reports to NGT in March 2023.
24. In line with Ash Utilization Notification, 2021, CPCB has developed ash portal on 19.12.2022 for enabling TPPs to furnish details of fly ash generation and utilization/ disposal. 180 TPPs out of 186 TPPs have uploaded the ash data on portal.
25. Director, DGMS mentioned that factor of safety of 1.5 is to be maintained to ensure long term stability and safety of OB dumps mixing with ash. Site specific

studies needs to be done to determine the percentage of ash to be mixed in the OB dumps. Further, ash can be used in place of sand stowing carried for filling up of underground mine voids.

26. The guidelines for technical specifications and annual certification of ash ponds/dykes have been further modified in view of amendment ash notification 30.12.2022 and CEA will obtain concurrence of Ministry of Power on the said guidelines.
27. Govt. of U.P. has directed District Magistrate, Sonbhadra to open a separate account to receive voluntary contributions and funds for environment restoration and relief.
28. Regarding health impact study, Madhya Pradesh Pollution Control Board nominated ICMR- NIREH for conducting health and risk impact assessment studies of operations of TPPs and ash generating industries. Govt. of U.P is yet to submit the status.
29. District Magistrate of Singrauli District, Madhya Pradesh has identified different SHGs and initiated skilling and outreach programme for promoting switch over to ash based brick/product manufacturing under State Rural Livelihood Mission. Action in this regard is yet to be taken by UP Govt.
30. Government of M.P. and U.P. have directed respective District Magistrates to take enforcement measures regarding mandatory use of ash based products/bricks on obligated entities such as building construction agencies.

(b) The **following decisions were made** during the meeting:

1. Allocation of pits no. 3 of Gorbi abandoned mine to Anpara TPP, UPRVUNL for backfilling within one month. Allotment of abandoned mine of SECL to Amarkantak TPP, M.P. to M/s MPPGCL and abandoned mine of WCL to TPPs.

(Action: Ministry of Coal, NCL, SECL and WCL)

2. Updating the list of coal mines approaching for closure of mine in 3-5 years so that TPPs can engage with coal mines for setting up of infrastructure for transportation and disposal of ash in mine voids.

(Action: Ministry of Coal)

3. Updating information of 82 identified abandoned mines (other than coal) and setting-up procedure for signing of MoU between the identified mines and TPPs. Steps for identification of more mines for enabling TPPs achieve 100% ash utilisation.

(Action: Ministry of Mines)

4. Issue necessary instructions regarding not requiring permission from DGMS for filling up of mine voids and mixing of ash in OB dumps, and SOP for carrying out feasibility studies in respect of all mines.

(Action: Ministry of Coal and Ministry of Mines)

5. Stipulation of specific conditions in Environmental Clearances of coal mines and non-coal mines for conducting feasibility studies for assessment of voids for backfilling of ash and mixing of ash with overburden, taking up backfilling ash and OB mixing activities during operations as well as post closure of mines in line with the Ash Utilization Notification, 2021

(Action: MoEF&CC)

6. Utilization of ash in the road construction project NH39 from Sidhi to Waidhan, Singrauli, M.P. for 92 km. MoRTH may be requested to issue necessary instructions to NHAI to engage with TPPs for utilization of ash.

(Action: MoEF&CC and MoRTH)

7. Ministry of Coal may be apprised about the action initiated by MPPCB and UPPCB on environmental non-compliances of coal mines in Singrauli and Sonbhadra region.

(Action: MoEFC&CC)

8. Examination of actions plans submitted by thermal power plants and stone crushers and carry out continued verification of the implementation of action plans of TPPs, Industries, mines and stone crushers in Singrauli and Sonbhadra region.

(Action: CPCB)

9. Examine the inspection and compliance reports of Anpara and Obra TPPS w.r.t. desilting ash from Rihand Reservoir and Renu River and disposal of desilted ash in low lying areas.

(Action: CPCB)

10. Finalization of guidelines for technical specifications and annual certification of ash ponds/dykes.

(Action: CPCB and CEA)

11. Dust containment and suppression measures are to be taken by the stone crushers. Carry out assessment of air quality in and around stone crushers on regular basis to verify the impact of mitigation measures taken by the stone crushers.

(Action: Stone crushers in Singrauli and Sonbhadra region, MPPCB & UPPCB)

12. All thermal power plants and stone crushers shall update the progress in regard to the implementation of action plans by respective stakeholders.

(Action: All TPPs and stone crushers in Singrauli and Sonbhadra region)

13. Creation of separate account to receive voluntary contributions and funds for environment restoration and relief. State Government to take measures for restoration of environment and provide relief to victims of damage in a manner as may be found appropriate from these funds.

(Action: Env Dept., Government of U.P.)

14. Submission of one-year action plan along with specific deliverables in respect of conducting health and risk impact assessment studies of operations of TPPs and ash generating industries, within one month.

(Action: State Governments of U.P. and M.P.)

15. Enforcement measures regarding mandatory use of ash based products/bricks by all building construction agencies within 300 km radius of TPPs prescribed under Ash Utilisation Notification, 2021, shall be implemented.

(Action: UPPCB, MPPCB, concerned District Magistrates)

16. Skilling and outreach programmes to be conducted on similar lines of training of SHGs by M.P. for promoting switch over to ash based brick/ product manufacturing.

(Action: Govt. of U.P. and M.P.)

17. Anpara TPP and Obra TPP to desilt the remaining ash discharged in Rihand Reservoir and Renu River by May, 2023. Desilted ash disposed in low lying areas to be stabilized with soil cover and grass/ green belt to avoid pollution.

(Action: M/s UPRVUNL)

18. Assessment and monitoring of desilting activities in water bodies where Anpara and Obra discharged ash, and stabilization activities of low lying area where desilted ash is filled up to verify the status of remedial measures taken, by June, 2023.

(Action: UPPCB and Forest Department, Govt. of UP)

19. Inter-state transportation of ash is to be permitted for utilization of ash in the specified eco-friendly purposes along with safeguards for pollution control and mitigation.

(Action: Govt. of UP and M.P.)

20. Submission of action plan indicating the timelines for initiation and completion of feasibility studies for assessing the area and volume available for ash backfilling in mine voids and mixing of ash in OB dumps in all NCL mines.

(Action: NCL)

21. Submission of time-bound action plan for achieving 100% utilization of ash by TPPs. Cost-benefit analysis to be conducted for outweighing benefits of bearing ash transportation cost/promotion of ash based product manufacturing/coal transportation cost vis-à-vis environmental compensation.

(Action: UPRVUNL, NTPC and Anpara Lanco, All TPPs)

22. A study on mixing of red mud with ash in Gorbi abandoned mine is to be carried out to neutralize acidic water of Gorbi mine pit.

(Action: NTPC and NCL)

23. Effective implementation of the mandate of 100% utilisation of ash by TPPs across the country must be ensured. In this regard, the compliance matrix shared along with the minutes of the first meeting must be implemented in a time bound manner and on a regular basis.

(Action: CPCB, CEA, All State Govts. (having TPPs), All stakeholders as per Compliance Matrix)

List of Participants

1. Smt. Leena Nandan, Secretary, EF&CC
2. Shri Tanmay Kumar, Chairman, CPCB
3. Shri Naresh Pal Gangwar, Additional Secretary, MoEFCC
4. Shri Deepal Goal, Director, MoC
5. Shri Dheeraj Kumar, DS, M/o Mines
6. Shri Tirupathi Reddy Kommidi, Additional Chief Manager, NLC India Ltd., MoC
7. Shri Nazimuddin, Scientist F, CPCB
8. Shri N. Subrahmanyam, Scientist D, MoEFCC
9. Shri Chandra Mohan Thakur, PDS- Env., GoMP & MS, MPPCB
10. Shri Ajay K. Sharma, MS, UPPCB
11. Shri Mohammed Niyazi, Dir. (S&T), DGMS
12. Shri Ashutosh Kr. Dubey, ADM, Sonbhadra
13. Shri Manjeet K. Sinha, AGM-IT, NTPC
14. Shri MVR Reddy, ED, SSEA, NTPC
15. Shri S.K. Takhele, CGM (SEA), NTPC
16. Shri Chetan Awsathi, STA to ED (SSEA), NTPC
17. Shri Durga Nand Jha, JRF, CPCB
18. RO, MPPCB, Singrauli
19. Shri Hemant K. Sharma, Director (Environment), GoMP
20. Shri Rajendra Singh, CEO, UPPCB
21. Shri R.K. Gupta, Superintending Engineer, MPPCB
22. Shri Umesh Kr. Gupta, AEE, UPPCB, Sonbhadra
23. Shri Gulshan Raj, CE, CD, CEA
24. Shri Amit Kumar, Director, CD, CEA
25. Ms. Rehana Beg, Resident Engineer, M.P. Power Generating Company Limited
26. Shri Ravikant Raut, Chief Chemist, M.P. Power Generating Company Limited
27. Shri M. L. Patel, Chief Engineer, M.P. Power Generating Company Limited
28. Shri Ashok Rai, Mining Officer, Singrauli
29. Shri Ranjeet Nirmal, DMO GBN, Mining Dept. Govt. of UP
30. Shri Sanjeev Kumar, GM (Env. &F), NCL

31. Dr. Avinash Tripathi, Officer on Special Duty, NOIDA Authority
32. Shri R. K. Sharma, Project Eng., Noida Authority
33. Shri M. Narasimha Murthy, V.P., Lanco Anpara Power Ltd.
34. Shri Himanshu Verma, Sr. Manager, Lanco Anpara Power Ltd.
35. Shri Santosh Kumar Singh, Head, Adani, Mohan Energy Ltd.
36. Shri S.K. Dutta, Director (Project), UPRVUNL
37. Dr. Vijay Kr. Yadav, AGM (Environment), Grasim Industries Ltd., Renukoot
38. Shri Sayed M Islam, Manager (EHS), Birla Carbon, Renukoot
39. Shri Ashwani Tyagi, NTPC
40. Shri Vinay Ramaiya
41. Ms. Vaishali Surawar, Hindalco
42. Shri Rajashekar, NTPC
43. Shri P N Sharma, IBM
44. Shri Bharat Bhushan Chugh, Associate, NTPC
45. Shri Debanjan Basak, RPSG
46. Shri Ajit Kumar, NTPC
47. Dr. Neeraj Verma, RRT 1
48. Shri Pushpender Gaur IBM RO, Gandhinagar
49. Prof. (Dr.) Partha Ghosh
50. Shri Surajit Basu
51. Dr. Vinod K Verma, Sr VP, Aditya Birla
52. Dr. Sanjoy Chakraborty, RPSG
53. Ms. Soubhagya Tripathy, Hindalco Aditya Birla
54. Shri Mukesh Mukesh, Aditya Birla