

### Status of compliance of decisions taken in the meetings of "Fly Ash Management and Utilization Mission"

Meeting No.	Decision Point	Decision taken	Concerned Agencies	Status of Action Taken / Compliance	Summary of Compliance	Time limit for compliance
First	1	Secretariat to be established in CPCB for coordination, monitoring and supervision of the actions emanating from the deliberations and decisions of the Fly Ash Supervision and Utilization Mission.	CPCB	IPC-II Division looking after the fly ash management at CPCB is acting as the Secretariat.	Completed	
First	2	For effective prevention, control and abatement of industrial pollution in Singrauli and Sonbhadra districts, the actions plans prepared based on the recommendations of the Joint Committee, mentioned out in Para 15 of the Hon'ble NGT's Order dated 18.01.2022, to be scrupulously implemented in a time-bound manner as per the action plans.	All Organizations and industries	TPPs and Coal mines: Action plans have been received from 10 TPPs, 9 Coal mines. Stone crushers of M.P: Out of total 63 stone crushers, measures taken by 61 operational stone crushers are as: i) 33- dust containment system, 31-wind breaking wall, ii) 60- water sprinkling, iii) 43- greenbelt, iv) 3 crushers to be closed; remaining crushers to meet timelines for pollution control. Stone crushers of UP: 313 valid stone crushers are there in 02 major clusters. Air pollution control system installed in all Stone crushers. 38 stone crushers were inspected and actions were taken against 12 defaulters. No new stone crusher is allowed in this area.	Completed	
First	3	CPCB and CEA to scrutinize the action plans submitted by the respective stakeholders as per Point No. 2 above to ensure that the action points have been prepared as per the recommendations of the Joint Committee as mentioned out in Para 15 of the Hon'ble NGT's Order dated 18.01.2022. CPCB to ensure that all the activities are covered and must have specific timelines.	CPCB, CEA	Action plans have been verified through the Oversight Committee and quarterly verification of implementation status is being done.	Completed	
First	4	In order to ensure 100% utilization of ash by lignite and coal based thermal power plants, effective monitoring and supervision of provisions of Ash Utilization Notification dated 31.12.2021 have to be scrupulously complied with. Respective stakeholders have been mapped in respect of the various activities mandated under the notification. CPCB to coordinate with all the regulatory/enforcing agencies and ensure the compliance of all the activities in a time bound and on a regular basis.	All Organizations and industries	CPCB: Implementation Committee meetings are held regularly. CPCB and CEA: Guidelines for technical specifications, O&M and annual certification of ash ponds/dykes prepared and uploaded on CPCB website.	Completed	
First	5	Concerned District Magistrates of Singrauli and Sonbhadra to submit action plans immediately for effective prevention, control and abatement of pollution from <b>stone crushers</b> located at their respective districts.  Further, the action plans submitted must be scrupulously implemented in a time bound manner.	Govt. of U.P. and M.P, DMs of Sonbhara and Singrauli	Same as in respect of Decision no. 2 of 1st MoM.  Action plans as submitted by the industries are being implemented, and status of compliance is verified periodically by SPCBs and quarterly by the Oversight Committees.	In-Process	Regular activity.
First	6	M/s Anpara 'C' Lanco to submit action plans based on the recommendations in para 15 of the Hon'ble NGT's Order dated 18.01.2022 immediately.	M/s Anpara 'C' Lanco, Govt. of U.P.	Action plan submitted by M/s Anpara 'C' Lanco Power.	Completed	

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First	7	Secretariat at CPCB to upload the action plans and the progress of the action plans on the web portal of CPCB by 5th of next month, the link of which may be placed on MoEFCC as well as the concerned State Government's and other stakeholders' websites. CPCB to put in place an IT based tool for updating the progress in regard to the implementation of action plans by respective stakeholders as well as in regard to the activities as per Point 4 above.	CPCB, State Govts of UP and MP, All stakeholders	The action plans which were submitted to MoEF&CC by power plants, coal mines, and industries in Singrauli and Sonbhadra Action Plan were shared with Oversight Committees members for MP and UP for scrutinizing on 12.12.2022. A web page - "Fly Ash Management and Utilization" – to place relevant information in public domain created on 13.12.2022 by CPCB.	Completed	
First	8	Concerned State Governments, the State Environment Departments and concerned SPCBs to take all measures for the prevention, control and abatement of the industrial pollution in Sonbhadra and Singrauli districts to bring down the pollution levels in these districts. The compliance of the conditions of CTOs as well as ECs in respect of all the industries, including the installation and functioning of all pollution control as well as monitoring devices, must be strictly complied with by all industrial/mining/ quarrying units. These compliances to be reported to CPCB on a monthly basis through a web portal that reflects the obligations and compliances as per CTO as well as EC in respect of all units.	State Governments of U.P. and M.P.	SPCBs are carrying out periodic inspections and taking follow up action to ensure compliance.	In-Process	Regular activity.
First	9	All the industrial, coal and other mining activities as well as the stone quarrying and crushing in the districts of Sonbhadra and Singrauli must be carried out in compliance with the Air Act, Water Act and EP Act. Regular inspections and audits to be carried out by the concerned SPCBs.	State Governments of U.P. and M.P.	SPCBs are carrying out periodic inspections and taking follow up action to ensure compliance. Oversight Committees of M.P and U.P. are carrying out quarterly inspections to verify the status of compliance.	In-Process	Regular activity.
First	10	The respective State Government to receive voluntary fund contributions out of the CSR funds from companies in respective districts. Concerned State Government to create a separate account to receive voluntary contributions and funds for environment restoration and relief. Concerned 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.	State Governments of U.P. and M.P.	An account 'Voluntary Contribution Fund for Environmental Restoration & Relief' has been opened jointly by the Government of M.P. and MPPCB.  Government of U.P. has also opened an account.	Completed	
First	11	Concerned State Governments to arrange for conducting <b>health and risk impact assessment studies</b> of operations of TPPs and ash generating industries.	State Governments of U.P. and M.P.	MPPCB on 12.04.2023 nominated ICMR- National Institute for Research in Environmental Health (NIREH) and requested District Collector, Singrauli to take appropriate action. Further, 03 proposals sanctioned on 27.06.2023 to be taken up by AIIMS, Bhopal.  UP: MoU has been signed with AIIMS Bhopal for conducting the "Public Health and Risk Impact Assessment study due to fly ash" consisting of 3 projects whose duration of completion is 6 month to 2 years. Study is being done.	In-Process	Same as MoM 2/3 and 3/14
Second	1	Government of U.P. to submit Action Plans regarding stone crushers in Sonbhadra District and the implementation report on the compliance of the conditions of CTOs as well as ECs in respect of all the industries.	Env. Dept. - Government of U.P.	Same as in respect of Decision no. 2 of 1st MoM.	Completed	Same as MoM 1/1&5

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Second	2	Government of U.P. to create a 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.	Env. Dept. - Government of U.P.	Same as in respect of Decision no. 10 of 1st MoM.	Completed	Same as MoM 1/10
Second	3	Concerned State Governments to arrange for conducting <b>health and risk impact assessment studies</b> of operations of TPPs and ash generating industries, and share the report with CPCB.	State Governments of U.P. and M.P.	MPPCB on 12.04.2023 nominated ICMR- National Institute for Research in Environmental Health (NIREH) and requested District Collector, Singrauli to take appropriate action. Further, 03 proposals sanctioned on 27.06.2023 to be taken up by AIIMS, Bhopal.  UP: MoU has been signed with AIIMS Bhopal for conducting the "Public Health and Risk Impact Assessment study due to fly ash" consisting of 3 projects whose duration of completion is 6 month to 2 years. Study is being done.	In-Process	Same as MoM 1/11, 3/14
Second	4	Oversight Committees comprising CPCB, concerned SPCB and respective DMs shall carry out continued verification of the implementation of action plans by industries in Singrauli & Sonbhadra, and furnish the status report once in quarter.	Oversight Committees of U.P. and M.P.	Oversight Committees of U.P. and M.P. carried out recent verification in January 2024 and issued appropriate instructions to industries for ensuring compliance.	In-Process	Regular activity. Same as MoM 1/9
Second	5	Northern Coalfields Ltd. (NCL) to conduct <b>feasibility study</b> in excavated portions of all its <b>operational mines</b> as well as abandoned mines, along with availability of volume for backfilling of ash in mine voids or <b>mixing of ash with external Overburden dumps</b> . A template comprising details of all the mines may be formulated and a report in this regard may be submitted.	Ministry of Coal	As per DGMS, mixing of ash with overburden to be carried out based on mine specific study by the mine management, which is to be conducted by the mine on receipt of notice from thermal power plants.  Feasibility study is ongoing at Nigahi operational mine of NCL.  CIMFR stated mixing of ash with Overburden in dumps of Gare Pelma mines successful.	In-Process	March 2024 for Nigahi mine. Same as MoM 3/20, 4/7, and 5/4
Second	6	Ministry of Coal and Ministry of Mines to take effective steps for identification of <b>more mines</b> and make them available to coal and lignite based thermal power plants for backfilling and mixing of ash with external overburden dumps, in line with the Ash Utilisation Notification, 2021.	Ministry of Coal, Ministry of Mines	MoC- 32 abandoned coal mines identified. <b>Central Level Working Group has convened 05 meeting under AS, MoC. Out of 21 mine of CIL, 19 allocated, 01 is being used as water reservoir by local community, and 01 not allocated as coal reserve not exhausted.</b> SCCL- 01 OC & 09 UG mines -100 lakh m3 bottom ash needed. New mines: CIL -18 new UG mines are being explored. MoM: 82 abandoned mines identified. (Later Ministry of Mines on 12.05.2023 & 23.05.2023 shared the list of additional non-coal mines: 56 mines surrendered to State Govt., 57 mines Part surrendered, Pits of 12 working mines available for backfilling with fly ash, and informed that Regional Controllers have been directed to identify more working mines).	In-Process	Regular activity. Same as MoM 3/2, 4/5, 5/2
Second	7	Director General, DGMS may be co-opted as member of the Mission.	MoEFCC	Director General, DGMS has been co-opted as a member of Fly Ash Management and Utilization Mission.	Completed	

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Second	8	Committee under the chairpersonship of Chairman, CPCB may convene a meeting for identification of mines as well as for the development of SOP for making operational/abandoned mines available to the TPPs with M/o Coal, NCL, DGMS, NTPC, Anpara-UPRVUNL and other stakeholders, and prepare the plan for studies(mine-wise/region wise or as deemed fit) regarding availability of mines with timelines along with parallel steps for the necessary approvals (as that of DGMS), for backfilling of ash and mixing of ash with OB in Singrauli and Sonbhadra region.	CPCB	Committee of Implementation and identification of mines was held under Chairman, CPCB on 18.02.2023. Recommendations: -MoC to update status of allocation and initiation of backfilling -MoC to undertake Mine (operational) specific studies for disposal of ash. -MoC to list out mines likely to be available. -MoC/MoM to simply procedure of allowing ash disposal in mine.  Third meeting convened on 06.10.2023.	Completed	
Second	9	All thermal power plants shall scrupulously implement the action plans to achieve 100% ash utilization as per the compliance cycle prescribed under the Ash Utilisation Notification, 2021.	All TPPs in Singrauli and Sonbhadra region	All thermal power plants have submitted and implementing action plans to achieve 100% ash utilization as per the compliance cycle prescribed under the Ash Utilisation Notification, 2021. Status of ash utilization during 1st year of 1st compliance cycle i.e. 2022-23 submitted has been presented before the Mission.	Completed	
Second	10	Action plans of thermal power plants shall also include status of annual safety certification of ash dykes and measures taken to prevent breaches, designation of officer responsible in this regard.	All TPPs	Annual safety certification of ash dykes has been included in the action plans which is mandatory as per Ash Notification dated 31.12.2021..	Completed	
Second	11	Anpara TPP, UPRVUNL shall submit the time bound action plan for 100% utilization of ash vis-à-vis present utilization rates, backfilling of ash in Gorbi mines along with the concerns of MPPCB regarding pollution from transportation, and other plans for achieving 100% utilization of ash.	Govt. of U.P, UPRVUNL	Action plan submitted by Anpara TPP, UPRVUNL. Central Level Working Group in its third meeting allocated Gorbi Pit 3 to the plant.	Completed	
Second	12	Draft guidelines for technical specifications and annual certification of ash ponds/dykes may be finalised.	CPCB and CEA	Guidelines for technical specifications, O&M and annual certification of ash ponds/dykes prepared and uploaded on CPCB website.	Completed	
Second	13	A meeting with Ministry of Coal, NCL, NTPC, Indian Railways, other TPPs, owners of private railway siding may be convened to identify mitigation measures for prevention, control and abatement of dust pollution predominantly caused by mining activities and transportation of coal in Singrauli region and furnish a detailed report. Accountability of pollution generated from coal transportation, loading and unloading activities may be fixed on TPPs, coal mines and railway siding (private or public) based on the jurisdiction of activities.	MPPCB and UPPCB	> Based on the recommendation of Oversight Committee, MPPCB issued letter dated 17.03.2023 regarding imposition of Environmental Compensation on Railways (ECR & WCR) and NCL. > Review meeting chaired by Principal Secretary, Env. Deptt., M.P. held on 25.04.2023. > Railway sidings: ECR-3, WCR-3, NCL-2 SECL have been directed for air pollution control measures. > NGT recently ordered report on pollution from transportation by Committee of MoEFCC, CPCB and SPCB.	Completed	

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Second	14	Skilling and outreach programmes may be conducted on similar lines of training of SHGs by MPPCB for promoting switch over to ash based brick/product manufacturing.	State Governments of U.P. and M.P.	<p><b>UP:</b> 1) ADM Sonbhadra has held a meeting with TPPs and concerned District Officers on 27.06.2022 to increase Fly Ash utilization in Ash based products/bricks in District Sonbhadra. At present 31 Fly Ash based brick manufacturing units are operational in Sonbhadra.</p> <p>2) UPPCB has given directions vide letter dated 09.05.2023 and 21.06.2023 to TPPs for organizing Skilling and outreach programmes for promoting switch over to ash based brick/product manufacturing.</p> <p>3) Workshop held on 07.10.2023 at UPRVUNL Obra, Sonbhadra to promote Ash Utilization in manufacturing of Fly Ash Bricks and in other sectors with representatives of Fly Ash Bricks Units, TPPs and District Administrative and SPCB.</p> <p><b>MP:</b> MPPCB on 12.04.2023 requested District Collector to identify SHGs for promotion of manufacturing of ash based products. Workshop was organized on 24.06.2023 for identified SHGs. TPPs have been directed to ensure the availability of fly ash to SHGs.</p>	Completed	Same as MoM 3/16, 4/14
Second	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 to promote ash based product manufacturing.	UPPCB, MPPCB and concerned DMs	<p><b>UP:</b> Secretary, DoEF&amp;CC, UP vide letter dated 28.04.2023 issued directions to concerned departments regarding mandatory use of ash based products/bricks by all building construction agencies within 300 km radius of TPPs, as per the provisions of Fly Ash notification dated 31.12.2021.</p> <p><b>MP:</b> MPPCB directed all the concerned departments, District Collector to enforce the measures regarding mandatory use of ash based products/ bricks. Meetings held under CS on 09.05.2023 and under PS, Env. Dept. on 27.06.2023 for implementation of action plans.</p>	Completed	Same as MoM 3/15 and 4/15
Second	16	NHAI may be requested to utilize the ash for the road construction project.	MoEFCC	MoEF&CC requested Chairman, NHAI to utilize ash in road construction projects.	Completed	
Second	17	As informed, studies found that red mud has alkaline in nature and is suitable for backfilling in acidic mines. Identification of an abandoned or working mine for disposal of red mud and boiler ash may be undertaken, if feasible.	NTPC, Hindalco and NCL	Central Laboratory, Bhopal has completed the study on mixing of red mud with fly ash in Gorbi mine. Based on the study report, MPPCB has recommended not to proceed further with such exercise as it may lead to the leaching of heavy metals embedded in the red mud besides treating the acidic water of mine voids.	Completed	Same as MoM 3/22, 4/16 and 5/18
Second	18	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.	All concerned stakeholders	<p>M/o Power issued show-cause to 43 TPPs (37 &lt;60% and 6 TPPs 60-80% utilisation).</p> <p>Out of 186 independent TPPs (FY 2021-22): 114, 21, 39 TPPs have respectively 3,4,5 year first compliance cycle, 12 TPPs: Non-operational.</p> <p>Out of 117 IPPs having first 3-year compliance cycle, 8 IPPs have failed to achieve minimum 80% annual ash utilization target.</p>	In-Process	Regular activity. Same as MoM 3/22, 4/21

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Third	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.	Ministry of Coal, NCL, SECL and WCL	MoC on 19.5.2023 allocated: Gorbi Pit- 2 to NTPC Vindhyanal, Gorbi Pit- 3 to Anpara TPS, UPRVUNL (MoU b/w NCL & UPRVUNL for Pit-3 executed on 15.07.2023, MoU b/w NCL & NTPC for Pit-2 under finalization),  Sharda OC: MoU signed with MB Power (MP) Ltd., Murra, Anuppur. 2.03 lakh CuM tonne fly ash has been filled Void in Sarni UG of WCL has been allotted, draft MOU is with MPPGCL for acceptance	Completed	
Third	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.	Ministry of Coal	NCL : As per the present scenario and available coal reserves in the mines, no mine of NCL will be closed in next 3-5 years. As per existing plan, life of the Kakri OCP and Krishnashila OCP is up to March, 2024 and March, 2028 respectively. However it is being planned to go for Expansion of Kakri OCP which will enhance the life of Kakri OCP. As per revised estimated balance coal reserve within same lease area of Krishnashila OCP, life of mine will be enhanced for further 2-3 years thereby enhancing the life of mine upto 2030-31.  MoC has agreed to explore more mines to be closed in nearby future.	In-Process	Regular activity. Same as MoM 2/6, 4/5 and 5/2
Third	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.	Ministry of Mines	Ministry of Mines on 12.05.2023 & 23.05.2023 shared the list of 207 non-coal mines: 82 abandoned mines: list shared earlier, 56 mines: surrendered to State Govt., 57 mines: Part surrendered, Pits of 12 working mines: available for backfilling with fly ash. Regional Controllers have been directed to identify working mines.	Completed	Same as MoM 4/2
Third	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.	Ministry of Coal and Ministry of Mines	DGMS vide letters dated 02.03.2022 and 12.09.2022 has informed that it has issued circular dated 16.01.2020 for backfilling or stowing of mine (abandoned or running) with fly ash, a mine-specific scientific study is required to be done and the study recommendations implemented, keeping in view the stability of dump slopes and safety factor for long time stability of dumps by the respective mine management.	Completed	Same as MoM 4/1, 4/9
Third	5	Stipulation of <b>specific conditions in Environmental Clearances</b> of coal mines and <b>non-coal mines</b> 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.	MoEF&CC	Under consideration/examination by EAC (Coal Mining).	In-Process	
Third	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.	MoEF&CC and MoRTH	MoEF&CC issued DO letter to Chairman, NHAI on 04.05.2023 to utilize ash in all road construction projects.	Completed	
Third	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.	MoEF&CC	SPCB report dated 30.06.2023 regarding non-compliances of coal mines will be shared.	Completed	

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Third	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.	CPCB	MPPCB and UPPCB are regularly conducting inspections. Oversight Committees of M.P. and U.P. are carrying out quarterly verification of the implementation of action plans of TPPs, Industries, mines and stone crushers in Singrauli and Sonbhadra region. Last round of verification was conducted in May-June 2023. Next quarterly verification is to be done in Oct 2023.	Completed	Same as MoM 1/3
Third	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.	CPCB	Inspection and compliance reports of Anpara and Obra TPPs were examined. CPCB requested UPPCB to verify the desilted quantity, direct Anpara TPS to desilt total quantity of deposited ash and time bound action plan, and verify action taken by Obra TPS for desilting of ash from Renu River.	Completed	
Third	10	Finalization of guidelines for technical specifications and annual certification of ash ponds/dykes.	CPCB and CEA	Guidelines for technical specifications, O&M and annual certification of ash ponds/dykes prepared and uploaded on CPCB website.	Completed	Same as MoM 2/12
Third	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.	Stone crushers in Singrauli and Sonbhadra region, MPPCB & UPPCB	UPPCB: Out of 313 Stone crushers in Sonbhadra area, 215 stone crushers have adequate Air Pollution Control Systems (APCS) such as covered conveyer system, covered jaw crusher, water sprinkling arrangement, wind breaking wall, green belt, pucca roads. 98 Stone Crushers are yet to install adequate APCS. Board issued show cause notices to 98 nos. of stone crusher units U/s 31-A of Air Act 1981, on 28.06.2023, 22.09.2023 & 25.09.2023 in which APCS were not adequate. Out of 98 units, closure directions issued against 17 Nos. of stone crusher units. Air quality monitoring has been carried out. PM10 levels have improved in 2022-23 as compared to the last year.  MPPCB: Out of 56 stone crushers in Singrauli region, 48 stone crushers have installed dust containment system, 41 have constructed wind breaking wall and 48 have arrangements for regular cleaning and wetting system. Further, 8 stone crushers were closed by Collector, Singrauli due to non-compliance. MPPCB conducted monitoring near stone crushers and PM10 levels were found within norms.	In-Process	Regular activity.
Third	12	All thermal power plants and stone crushers shall update the progress in regard to the implementation of action plans by respective stakeholders.	All TPPs and stone crushers in Singrauli and Sonbhadra region	TPPs of have submitted 3/5 year action plan for 100% ash utilization, and submitting latest compliance status of implementation of action plans, which is verified by Oversight Committees.  <b>MP:</b> Review meetings held under CS on 09.05.2023 and under PS, Env. Dept. on 27.06.2023 and 13.09.2023 for monitoring implementation of action plans. <b>UP:</b> UPPCB vide letter dated 11.05.2023 & 21.06.2023 directed TPPs to submit progress report.  Implementation status of action plans verified by OCs of M.P. and U.P. during its recenet verification in January 2024.	In-Process	Regular activity.
Third	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.	Env Dept. - Government of U.P.	Account has been opened by Government of U.P.  Action will be initiated for providing relief to victims of damage in a manner as may be found appropriate from these funds.	Completed	Same as MoM 1/10

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Third	14	Submission of one-year action plan along with specific deliverables in respect of conducting <b>health and risk impact assessment studies</b> of operations of TPPs and ash generating industries, within one month.	Governments of U.P. and M.P.	MPPCB on 12.04.2023 nominated ICMR- National Institute for Research in Environmental Health (NIREH) and requested District Collector, Singrauli to take appropriate action. Further, 03 proposals sanctioned on 27.06.2023 to be taken up by AIIMS, Bhopal.  UP: MoU has been signed with AIIMS Bhopal for conducting the "Public Health and Risk Impact Assessment study due to fly ash" consisting of 3 projects whose duration of completion is 6 month to 2 years. Study is being done.	In-Process	Same as MoM 1/11 and 2/3
Third	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.	UPPCB, MPPCB, concerned DMs	UP: Secretary, DoEF&CC, UP vide letter dated 28.04.2023 issued directions to concerned departments regarding mandatory use of ash based products/bricks by all building construction agencies within 300 km radius of TPPs, as per the provisions of Fly Ash notification dated 31.12.2021.  MP: MPPCB directed all the concerned departments, District Collector to enforce the measures regarding mandatory use of ash based products/ bricks. Meetings held under CS on 09.05.2023 and under PS, Env. Dept. on 27.06.2023 for implementation of action plans.	Completed	Same as MoM 2/15 and 4/15
Third	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.	Govts. of U.P. and M.P.	UP: 1) ADM Sonbhadra has held a meeting with TPPs and concerned District Officers on 27.06.2022 to increase Fly Ash utilization in Ash based products/ bricks in District Sonbhadra. At present 31 Fly Ash based brick manufacturing units are operational in Sonbhadra. 2) UPPCB has given directions vide letter dated 09.05.2023 and 21.06.2023 to TPPs for organizing Skilling and outreach programmes for promoting switch over to ash based brick/product manufacturing. 3) Workshop held on 07.10.2023 at UPRVUNL Obra, Sonbhadra to promote Ash Utilization in manufacturing of Fly Ash Bricks and in other sectors with representatives of Fly Ash Bricks Units, TPPs and District Administrative and SPCB.  MP: MPPCB on 12.04.2023 requested District Collector to identify SHGs for promotion of manufacturing of ash based products. Workshop was organized on 24.06.2023 for identified SHGs. TPPs have been directed to ensure the availability of fly ash to SHGs.	Completed	Same as MoM 2/14, 4/14
Third	17	Anpara TPP and Obra TPP to <b>desilt the remaining ash</b> discharged in Rihand Reservoir and Renu River by May, 2023. <b>Desilted ash disposed in low lying areas to be stabilized with soil cover and grass/ green belt</b> to avoid pollution.	M/s UPRVUNL	Anpara TPP: An amount of 2,06,540.944 m3 visible ash Anpara TPP from side pocket of Rihand Reservoir has been removed and filled in low lying areas. Stabilization of ash in low lying area with soil cover has been completed and <b>plantation work is in progress.</b>  Obra TPP: Total 58000 CuM ash is desilted from Renu river. Total ash removal work was completed by 31.05.2023. Desilted ash has been disposed in low lying areas in Obra Sec 2 & 3 and stabilized with soil cover. Above that Miyawaki plantation has been done.	In-Process	Same as MoM 3/18 and 4/20



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Third	18	Assessment and monitoring of <b>desilting activities in water bodies</b> where Anpara and Obra discharged ash, and <b>stabilization activities of low lying area</b> where desilted ash is filled up to verify the status of remedial measures taken, by June, 2023.	UPPCB and Forest Department - Govt. of U.P.	Assessment and monitoring completed. Stabilization of ash in low lying area with soil cover has been completed and plantation work is in progress in case of Anpara TPP, and desilted ash disposed in low lying areas in Obra Sec 2 & 3 has been stabilized with soil cover, and above that Miyawaki plantation has been done in case of Obra TPP. The status is being reviewed during quarterly visits of OC. <i>As per the observation made during OC's visit in January 2024, TPPs have been instructed to expedite the ongoing works.</i>	In-Process	Same as MoM 3/17 and 4/20
Third	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.	Govts. of U.P. and M.P.	Inter-state transportation of ash for eco-friendly purposes has not been banned.	Completed	
Third	20	Submission of action plan indicating the timelines for initiation and completion of <b>feasibility studies</b> for assessing the area and volume available for ash backfilling in mine voids and <b>mixing of ash in OB dumps</b> in all NCL mines.	NCL	<ul style="list-style-type: none"> <li>&gt; CSIR-CIMFR, Dhanbad has been requested to expedite the study of Nigahi.</li> <li>&gt; CSIR-CIMFR, Dhanbad will present the findings of feasibility study of Nigahi mine till date in next meeting of the Fly Ash Mission.</li> <li>&gt; The timeline of feasibility study along with the reason of field trial was not possible during monsoon season, submitted by CIMFR-Dhanbad through email dt 20.07.2023.</li> <li>&gt; The feasibility for backfilling of fly ash and mixing of ash in OB dumps in operating mines of NCL shall be assessed on basis of CIMFR report for the ongoing study at Nigahi OCP.</li> </ul>	In-Process	March 2024 Same as MoM 2/5, 4/7, and 5/4
Third	21	Submission of time-bound action plan for achieving 100% utilization of ash by TPPs. <b>Cost-benefit analysis</b> 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.	UPRVUNL, NTPC and Anpara Lanco, All TPPs	<p>TPPs have submitted 3/5 year action plan for 100% ash utilization. Status of ash utilization during 1st year of 1st compliance cycle i.e. 2022-23 submitted has been presented before the Mission.</p> <p><b>Cost-benefit analysis yet to be initiated by TPPs.</b> As per the status of utilization of ash environmental compensation will be imposed on non-compliant TPPs at the end of 1st compliance cycle.</p>	In-Process	
Third	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.	NTPC and NCL	Central Laboratory, Bhopal has completed the study on mixing of red mud with fly ash in Gorbi mine. Based on the study report, MPPCB has recommended not to proceed further with such exercise as it may lead to the leaching of heavy metals embedded in the red mud besides treating the acidic water of mine voids.	Completed	Same as MoM 2/17, 4/16, and 5/18
Third	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.	All stakeholders	<ul style="list-style-type: none"> <li>&gt; Status of ash utilization during 1st year of 1st compliance cycle i.e. 2022-23 submitted has been presented before the Mission.</li> <li>&gt; Necessary actions being taken in coordination with SPCBs, MoP, MoC.</li> <li>&gt; 05 meetings of Central Level Working Group (Ministry of Coal) for allotment of coal mine pits held. 19 mines allocated, 01 is being used as water reservoir and 01 not allocated as coal reserve not exhausted.</li> <li>&gt; Third joint meeting of Committees under Para E(3) and Para B(5i), scheduled on 06.10.2023.</li> <li>&gt; SPCBs have been given access to portal to monitor compliance. Direction u/s 18(1)(b) have also been issued by CPCB to SPCBs. Further communication made with SPCBs vide letter dated 19.01.2024.</li> </ul>	In-Process	Regular activity. Same as MoM 2/18, 4/21

**Status of compliance of decisions taken in the meetings of "Fly Ash Management and Utilization Mission"**

Meeting No.	Decision Point	Decision taken	Concerned Agencies	Status of Action Taken / Compliance	Summary of Compliance	Time limit for compliance
Fourth	1	SOP to be developed in respect of working mine (opencast and underground mines) for safety related issues in allocation of mines. Also, SOP to be formulated for carrying out feasibility studies for filling up of mine voids in respect of all mines.	Ministry of Labour and Employment, and DGMS	DGMS vide letters dated 02.03.2022 and 12.09.2022 has informed that for backfilling or stowing of mine (abandoned or running) with fly ash, a mine-specific scientific study is required to be done and the study recommendations implemented, keeping in view the stability of dump slopes and safety factor for long time stability of dumps by the respective mine management. The required guidelines/SOP have already been issued by DGMS.	Completed	Same as MoM 3/4
Fourth	2	Updating list of identified abandoned mines for enabling TPPs to approach the concerned mines for backfilling of mine voids with ash for achieving 100% ash utilisation.  SOP for signing-up of MoU between the identified mines and TPPs to be finalised.	Ministry of Mines	Ministry of Mines on 12.05.2023 & 23.05.2023 shared the list of 207 non-coal mines: 82 abandoned mines: list shared earlier, 56 mines: surrendered to State Govt., 57 mines: Part surrendered, Pits of 12 working mines: available for backfilling with fly ash.  Regional Controllers have been directed to identify working mines.  SOP for signing-up of MoU between the identified mines and TPPs has been made by MoC and MoM.	Completed	Same as MoM 3/3
Fourth	3	Details of SOP followed for Singareni underground mine (SCCL) for ash filling in mine voids may be shared with WCL and NCL for adoption of similar SOP conditions in the MoU to be signed with TPPs. A copy may be shared with MoEFCC.	Ministry of Coal	SOP followed for Singareni underground mine (SCCL) for ash filling in mine voids shared with WCL and NCL, and MoEFCC.	Completed	
Fourth	4	Status regarding details of identified mine voids, allocation to TPPs, signing of MoU and quantity of ash filled up against the available volume may be shared and may be put up on the website and updated monthly.	Ministry of Coal	Status regarding details of identified mine voids, allocation to TPPs, signing of MoU and quantity of ash filled up against the available volume were presented before the Mission during the 5th meeting. Mine voids in which Fly Ash filling is ongoing/ completed: CIL 12 nos. (MCL-06; SECL-04; NCL-01;ECL-01), and SCCL 9 Mine voids where MoU is in process/signed: 06 nos. (NCL-02; BCCL-01, ECL - 2,WCL-01)	In-Process	Regular activity
Fourth	5	List of coal mines approaching for closure of mines in 3-5 years to be updated and shared with MoP & TPPs for making early allocation, signing of MoU and preparatory activities for initiation of backfilling of ash.	Ministry of Coal	NCL identified Kakri Opencast Project (March, 2024) and Krishnashila Opencast Project (March, 2027). Central Level Working Group has held 5 meetings so far and has instructed CIL and SCCL to explore more mines to be closed in nearby future. Further, TPPs have also been asked to locate nearby mines available for ash filling and submit requests for allocation.	In-Process	Regular activity. Same as MoM 2/6, 3/2 and 5/2
Fourth	6	A scientific methodology with <b>GIS mapping</b> may be evolved for allocation of mine voids/ mixing of OB dumps with ash to TPPs based on proximity to the mine and transportation distance so that the environmental impacts/ costs of transportation can be minimised. In case of Sharda OC mine (Trench -1, 2 & 3), existing allocation of 90,000 m3 to Amarkantak TPS, MPPGCL may be reviewed and it may be increased as the TPP is 16 kms from the said mine.	Ministry of Coal	MoC to initiate action for facilitating GIS mapping for allocation of mine voids/ mixing of OB dumps to nearby TPPs.  Baiga OCM, Trench ABCD, Sharda OCM and Trench T-3 patch, Sharda OCM of SECL in Sohagpur area allocated to Amarkantak TPS by Central Level Working Group in its 5th meeting on 20.12.2023.	In-Process	Same as 5/6

### Status of compliance of decisions taken in the meetings of "Fly Ash Management and Utilization Mission"

Meeting No.	Decision Point	Decision taken	Concerned Agencies	Status of Action Taken / Compliance	Summary of Compliance	Time limit for compliance
Fourth	7	Completion of <b>feasibility study</b> for Nigahi operational mine within two months and submission timelines for initiation and completion of feasibility studies for other working mines for assessment of area and volume available for ash backfilling in mine voids and <b>mixing of ash in OB dumps</b> in all NCL mines. Findings of feasibility study of Nigahi operational mine shall be presented during the next meeting of the Mission.	Ministry of Coal, NCL	<ul style="list-style-type: none"> <li>&gt; CSIR-CIMFR, Dhanbad has been requested to expedite the study of Nigahi.</li> <li>&gt; CSIR-CIMFR, Dhanbad will present the findings of feasibility study of Nigahi mine till date in next meeting of the Fly Ash Mission.</li> <li>&gt; The timeline of feasibility study along with the reason of field trial was not possible during monsoon season, submitted by CIMFR-Dhanbad through email dt 20.07.2023.</li> <li>&gt; The feasibility for backfilling of fly ash and mixing of ash in OB dumps in operating mines of NCL shall be assessed on basis of CIMFR report for the ongoing study at Nigahi OCP.</li> </ul>	In-Process	March 2024 for Nigahi mine. Same as MoM 2/5, 3/20, and 5/4
Fourth	8	Meeting with all TPPs to get the details about abandoned mines which may be geographically favourable to the TPPs and furnish the list of TPPs along with priority list of abandoned mines.	MoP, CEA	A meeting has been convened with all TPPs on 25.08.2023 to get the details about abandoned mines which may be geographically favourable to the TPPs, which was already forwarded to the TPPs. The requests of TPPs are reviewed for allocation of abandoned mines in the Central Level Working Group's meeting convened under AS, MoC.	Completed	
Fourth	9	M/o Labour and Employment and DGMS to be communicated regarding finalisation of SOP in regard to backfilling of ash in opencast and underground mines (for both abandoned as well as working mines) and mixing of ash with overburden in dumps. A separate meeting may be convened with DGMS, M/o Coal and M/o Mines in this regard.	MoEF&CC	DGMS vide letters dated 02.03.2022 and 12.09.2022 has informed that for backfilling or stowing of mine (abandoned or running) with fly ash, a mine-specific scientific study is required to be done and the study recommendations implemented, keeping in view the stability of dump slopes and safety factor for long time stability of dumps by the respective mine management. The required guidelines/SOP have already been issued by DGMS.	Completed	Same as MoM 3/4, 4/1
Fourth	10	Third-party audit for verification of implementation of action plans of TPPs, industries, stone crushers and coal mines in Singrauli and Sonbhadra region including desilting activities and reclamation of low lying areas carried out, may be undertaken through empanelled institutions/agencies and the report in this regard may be furnished during the next meeting of Mission. CPCB may workout the cost to be incurred by individual industry in case of unit specific audit and jointly by cluster of industries in case of cluster specific audit.	CPCB	Implementation of action plans is verified on quarterly basis by OCS empowered by NGT. Recent verification has been carried out in January 2024. Updated status of implementation of action plans were sought from the stakeholders, and the same has been compiled. The status of implementation of action plans and preliminary comments of OCs are attached.	In-Process	Regular activity
Fourth	11	In order to ensure 100% utilization of ash by all lignite and coal based thermal power plants across the country, effective monitoring and supervision of provisions of Ash Utilization Notification dated 31.12.2021 have to be scrupulously complied with. Respective stakeholders have been mapped in respect of the various activities mandated under the notification which has been shared with CPCB with the minutes of previous meeting. CPCB to coordinate with all the regulatory/enforcing agencies and ensure the compliance of all the activities in a time bound and on a regular basis.	CPCB, MoP, CEA, All State Govts, All stakeholders	<ul style="list-style-type: none"> <li>&gt; Effective monitoring and supervision of provisions of Ash Utilization Notification dated 31.12.2021 are being carried out in coordination with SPCBs, MoP, MoC.</li> <li>&gt; 05 meetings of the Central Level Working Group (Ministry of Coal) for allocation of coal mine pits have been held. Out of 21 mines of CIL, 19 mines allocated, 01 is being used as water reservoir and 01 not allocated as coal reserve not exhausted.</li> <li>&gt; Third (joint) meeting of Committees under Para E(3) and Para B(5.i), convened on 06.10.2023.</li> <li>&gt; SPCBs have been given access to the ash portal to monitor compliance. Directions u/s 18(1)(b) issued to SPCBs to ensure immediate registration of CPPs and regular monitoring of status uploaded by TPPs. Follow up made with SPCBs vide letter dated 19.01.2024.</li> </ul>	In-Process	Regular activity

### Status of compliance of decisions taken in the meetings of "Fly Ash Management and Utilization Mission"

Meeting No.	Decision Point	Decision taken	Concerned Agencies	Status of Action Taken / Compliance	Summary of Compliance	Time limit for compliance
Fourth	12	Directorate of Mines and Geology may update the list of abandoned mines available in their respective States and make it available on State Govts. website including abandoned stone crushers. This may be put up on the website and updated every month.	Govts. of U.P. and M.P.	<p><b>UP:</b> 1) UPPCB has sent letter dated 25.07.2023 to Mining Department, Sonbhadra and letter dated 13.10.2023 to Director, Geology and Mining Dept. U.P. to provide details of Abandoned Mines in district Sonbhadra regarding ash utilization.</p> <p>2) Director, Geology and Mining Department, U.P. has sent the details of abandoned mines in district Sonbhadra (06 Nos.) and Jhansi (04 Nos.), vide letter dated 13.10.2023.</p> <p>3) UPPCB has sent details of abandoned mines to TPPs for taking necessary steps for backfilling of abandoned mines, vide letter dated 16.10.2023.</p> <p><b>MP:</b> MPPCB constituted a four-member Committee under the chairpersonship of District Collector of each District for identification and allotment of abandoned non-coal mines to TPPs. The list of mines available for ash disposal has been uploaded on Mining Department's website.</p>	In-Process	Regular activity
Fourth	13	Environmental Compensation collected by respective SPCBs from the industries of Singrauli and Sonbhadra region prior to the opening of specific accounts and kept in common EC fund, may be transferred to respective accounts created by the State Govts, in addition to voluntary contributions. A mechanism to be put in place to utilise the funds received from this region to be used only for the said region for restoration of environment and relief. Further, State Forest Department may be engaged for carrying out measures for restoration of environment.	Govts. of U.P. and M.P.	<p><b>UP:</b> 1) Separate account for environment restoration and relief fund has been opened by District Administration with Account No. 01650110071496, IFSC-UCBA0000165 in UCO Bank Robertsganj, Sonbhadra .</p> <p>2) District Administration of Sonbhadra has been asked to submit action plan detailing activities to be carried out from the said account. So that O.A. can be filed in Hon'ble NGT giving the details of action plan for transferring the EC fund into this account.</p> <p><b>MP:</b> Voluntary contribution has not been received so far from any organization. Separate provision has been made for industries depositing environmental compensation and its utilization for improvement of environment.</p>	Completed	
Fourth	14	Increase in utilisation of quantum of ash for making ash based products or ecobricks through SHGs may be assessed by comparing pre- and post-skilling and outreach programmes. This may be updated every three months. SHGs to be involved in making eco-bricks that can be used in tree plantation/afforestation, toilet construction activities of the public utility projects.	Govts. of U.P. and M.P.	<p><b>UP:</b> 1) ADM Sonbhadra has held a meeting with TPPs and concerned District Officers on 27.06.2022 to increase Fly Ash utilization in Ash based products/ bricks in District Sonbhadra. At present 31 Fly Ash based brick manufacturing units are operational in Sonbhadra.</p> <p>2) UPPCB has given directions vide letter dated 09.05.2023 and 21.06.2023 to TPPs for organizing Skilling and outreach programmes for promoting switch over to ash based brick/product manufacturing.</p> <p>3) Workshop held on 07.10.2023 at UPRVUNL Obra, Sonbhadra to promote Ash Utilization in manufacturing of Fly Ash Bricks and in other sectors with representatives of Fly Ash Bricks Units, TPPs and District Administrative and SPCB. Next workshop planned in Feb 2024.</p> <p><b>MP:</b> MPPCB on 12.04.2023 requested District Collector to identify SHGs for promotion of manufacturing of ash based products. Workshop was organized on 24.06.2023 and 13.09.2024 for identified SHGs. TPPs have been directed to ensure the availability of fly ash to SHGs.</p>	In-Process	Regular activity. Same as MoM 2/14, 3/16

### Status of compliance of decisions taken in the meetings of "Fly Ash Management and Utilization Mission"

Meeting No.	Decision Point	Decision taken	Concerned Agencies	Status of Action Taken / Compliance	Summary of Compliance	Time limit for compliance
Fourth	15	Implementation of effective enforcement measures regarding mandatory use of ash based products/bricks by all building construction agencies within 300 km radius of TPPs as prescribed in Ash Utilisation Notification, 2021 and implementation of additional measures beyond the Notification, to minimise the disposal of ash in mine voids and low lying areas.	Govts. of U.P. and M.P.	<p><b>UP:</b> Secretary, DoEF&amp;CC, UP vide letter dated 28.04.2023 issued directions to concerned departments regarding mandatory use of ash based products/bricks by all building construction agencies within 300 km radius of TPPs, as per the provisions of Fly Ash notification dated 31.12.2021.</p> <p><b>MP:</b> MPPCB directed all the concerned departments, District Collector to enforce the measures regarding mandatory use of ash based products/ bricks. Meetings held under CS on 09.05.2023 and under PS, Env. Dept. on 27.06.2023 for implementation of action plans.</p>	Completed	Same as MoM 2/15 and 3/15
Fourth	16	Study on mixing of red mud with ash and its environmental aspects such as leaching of heavy metals into ground and surface water may be conducted and the results may be shared with CPCB.	State Govt. of M.P., MPPCB	Central Laboratory, Bhopal has completed the study on mixing of red mud with fly ash in Gorbhi mine. Based on the study report, MPPCB has recommended not to proceed further with such exercise as it may lead to the leaching of heavy metals embedded in the red mud besides treating the acidic water of mine voids.	Completed	Same as MoM 2/17, 3/22, and 5/18
Fourth	17	Ambient air quality monitoring in and around stone crushers to be conducted and baseline data of last two years (same season) be analysed to verify impact of mitigation measures taken by stone crushers. This may be carried out on a regular basis and data may be compiled in a continuous manner to assess the improvements as well as its sustainability. Carry out continuous evaluation of CEPI Score of Singrauli and Sonbhadra region and compile the data over the time in a continuous manner to assess the progress made. A presentation in this regard along with the implementation of CEPI action plan and verification/monitoring of desilting activities of Obra & Anpara (UPRVUNL) may be made during next meeting of the Mission.	Govts. of U.P. and M.P., UPPCB and MPPCB	<p><b>UP:</b> 1) The stone crushers are mainly located in clusters across various areas of Sonbhadra District, namely Dalla, Billi, Obra, Chopan Bardia, Sundariya Road. 2) Ambient Air Quality Monitoring carried out by UPPCB at difference location of the Stone Crusher region on dated 24.06.2023, 24.07.2023 &amp; 22.9.2023. 3) The Ambient Air Quality report, shows that regular inspection carried out and action taken against defaulter units had resulted in improved ambient air quality of the region. UPPCB had previously inspected 155 units and recently 158 units, and has issued show cause notices and closure directions to non-compliant units.</p> <p><b>MP:</b> Air quality analysis has been carried out in the Singrauli region during Dec, 2021- Sept, 2022 and Dec, 2022-Sept, 2023. Air Quality Index (AQI) has marginally improved from 157 in 2021-22 to 130 in 2022-23. There has been significant improvement in air quality during Jul-Sep.</p>	In-Process	Regular activity. Same as MoM 5/17
Fourth	18	SOP to be laid down for stipulation of measures to be taken during road transportation of ash, in the permission/ Consent to Operate issued for backfilling of mine void with ash and mixing the ash with OB.	Govt. of U.P. and M.P., MPPCB and UPPCB	<p><b>UP:</b> UPPCB has directed NCL mines of Sonbhadra to submit compliance report of decision/ recommendation for maximum transportation of Fly ash through Rail/marry go round and in case of road transportation of Fly ash, it should be done through covered trucks vide letter dated 20.09.2023.</p> <p><b>MP:</b> CPCB has issued "Guidelines for disposal/utilisation of Fly Ash for reclamation of Low Lying Areas and in Stowing Abandoned mines/ Quarries", which includes provisions for disposal of ash in mine voids in an environmentally sound manner. So, at present there is no need of any separate SOP.</p>	Completed	

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Meeting No.	Decision Point	Decision taken	Concerned Agencies	Status of Action Taken / Compliance	Summary of Compliance	Time limit for compliance
Fourth	19	Finalization and signing of MoU with M/s NCL for initiation of backfilling activities in Gorbi Pit-3, within a week and timelines for commencing backfilling activities to be shared. Action taken report in this regard may be submitted to the MoEF&CC.	Govt. of U.P., Anpara TPP, UPRVUNL, MoC and NCL	> MoU between UPRVUNL – Anpara TPS and NCL has been signed on 15.07.2023 for backfilling of fly ash in pit 3 of abandoned Gorbi mine. > UPRVUNL – Anpara TPS has to share the timelines for commencing of backfilling in pit 3.	Completed	
Fourth	20	Carry out <b>desiltation of remaining quantity of ash discharged in Rihand reservoir</b> by Anpara TPP. Desilted ash disposed in low lying areas to be <b>stabilized with soil cover and grass/ green belt</b> . Progress to be updated on the website on monthly basis.	Govt. of U.P., Anpara and Obra TPP, UPRVUNL	<b>UPPCB:</b> Directed M/s Obra & M/s Anpara TPP to submit the current status/progress of desilting of ash from Rihand River & Rihand Reservoir respectively and for stabilization of desilted ash disposed in low lying areas with soil cover and grass/ green belt vide letter dt. 20.09.2023. <b>Anpara TPP:</b> An amount of 2,06,540.944 m3 visible ash Anpara TPP from side pocket of Rihand Reservoir has been removed and filled in low lying areas. Stabilization of ash in low lying area with soil cover has been completed and <b>plantation work is in progress</b> .  <b>Obra TPP:</b> Total 58000 CuM ash is desilted from Renu river. Total ash removal work was completed by 31.05.2023. Desilted ash has been disposed in low lying areas in Obra Sec 2 & 3 and stabilized with soil cover. Above that Miyawaki plantation has been done.	In-Process	Same as MoM 3/17 and 3/18
Fourth	21	All the pending/ ongoing activities in respect of implementation of decisions made during 1st, 2nd and 3rd meeting of the Mission shall be undertaken and action taken report shall be furnished. Progress to be updated on the website on monthly basis. Necessary formats may be put up on the website to enable all stakeholders to upload the progress online. Login and passwords for all stakeholders to be generated immediately.	Concerned Ministry/ CPCB/ State Govts./ SPCBs/ Organisation	> Updated status of action taken on decisions of 1st, 2nd, and 3rd meetings have been sought from the stakeholders in a uniform format, and the same has been compiled (attached).	In-Process	Regular activity
Fifth	1	Effective implementation of the provisions of Ash Utilization Notification, 2021 for mandatory 100% utilisation of ash by TPPs must be ensured. Status in this regard may be presented in the next Mission meeting.	Ministry of Power and CEA	> "Guidelines on Design, Construction, O&M and Annual Certification of Coal Ash Ponds/Dykes" - Published by CEA & CPCB and it is available at both CPCB and CEA website. > CPCB has been informed about the changes required in the coal ash portal as it is the only window to look through at TPPs ash disposal performance. > Recently a Joint meeting of CEA, with CPCB and NTPC chaired by the Member (Thermal) CEA, advising CPCB to engage professional IT solutions agency for the upkeep of the portal.	In-Process	Regular activity
Fifth	2	Details regarding total volume of mine voids and quantum of ash that can be utilised and quantum of ash that has been utilised so far in mine void filling and mixing of ash in OB dumps along with the list of mines approaching for closure of in 3-5 years may be shared.	Ministry of Coal and Ministry of Mines	NCL : As per the present scenario and available coal reserves in the mines, no mine of NCL will be closed in next 3-5 years. Details of available mines already provided to allocation.  MoC has agreed to explore more mines to be closed in nearby future.  Ministry of Mines on 12.05.2023 & 23.05.2023 shared the list of 207 non-coal mines: 82 abandoned mines: list shared earlier, 56 mines: surrendered to State Govt., 57 mines: Part surrendered, Pits of 12 working mines: available for backfilling with fly ash. Regional Controllers have been directed to identify working mines.	In-Process	Regular activity. Same as MoM 2/6, 3/2 and 4/5

### Status of compliance of decisions taken in the meetings of "Fly Ash Management and Utilization Mission"

Meeting No.	Decision Point	Decision taken	Concerned Agencies	Status of Action Taken / Compliance	Summary of Compliance	Time limit for compliance
Fifth	3	Stipulation of specific provisions in Mine Closure Plan for enabling activities of backfilling of ash in available/ remaining mine void and mixing it with OB dumps.	Ministry of Mines and Ministry of Coal	MOC: SOP has been made regarding specific provisions in Mine Closure Plan for enabling activities of backfilling of ash in available/ remaining mine void and mixing it with OB dumps.  MOM: The matter is a safety-related issue. Therefore, stipulation of specific provisions in Final Mine Closure for enabling activities of backfilling of ash in available/remaining mine voids and mixing it with OB dumps may be considered subject to favourable recommendations of the scientific study carried out as per DGMS (Tech) circular No. 3 dated 16.01.2020 in respect of coal mines	Completed	
Fifth	4	Completion of feasibility study to assess the area/volume available for <b>ash backfilling and mixing of ash in with OB</b> of NCL mines at Nigahi operational mine by CIMFR within given timeframe. Findings of <b>feasibility study of Nigahi operational mine</b> to be presented during the next meeting of the Mission.	Ministry of Coal and NCL	> CSIR-CIMFR, Dhanbad has been requested to expedite the study of Nigahi. > CSIR-CIMFR, Dhanbad will present the findings of feasibility study of Nigahi mine till date in next meeting of the Fly Ash Mission. > The timeline of feasibility study along with the reason of field trial was not possible during monsoon season, submitted by CIMFR-Dhanbad through email dt 20.07.2023. > The feasibility for backfilling of fly ash and mixing of ash in OB dumps in operating mines of NCL shall be assessed on basis of CIMFR report for the ongoing study at Nigahi OCP.	In-Process	September 2024 Same as 2/5, 3/20, and 4/7
Fifth	5	NCL to make a presentation in the next meeting of the Mission regarding action plan and status of mine closure in terms of reclamation and restoration of biodiversity for the abandoned mines.	NCL	The presentation was made by NCL before the Mission during its 6th meeting.	Completed	
Fifth	6	<b>Geo-tagging</b> of Thermal Power Plants and Geo-tagging of mine voids may be undertaken.	Ministry of Power and Coal	Geo-tagging of Thermal Power Plants and mine voids is a planned feature of Ash Portal which will be available after launch of the updated Ash Portal by the IT Division, CPCB.	In-Process	
Fifth	7 (1)	SOP for allocation of mines in respect of safety and administrative related matters (both UG/OC, working as well as abandoned)	MoC and MoM	Required SOP has been made by MOC and MOM.	Completed	
Fifth	7 (2)	SOP for signing of MoU between identified mines and TPPs	MoC and MoM	Required SOP has been made by MOC and MOM.	Completed	
Fifth	7 (3)	SOP for carrying out feasibility studies for identification of mine voids or OB dumps mixing of ash with OB in operational mines.	MoC and MoM	Required SOP has been made by MOC and MOM.	Completed	
Fifth	7 (4)	SOP for carrying of scientific studies for backfilling of ash in mine voids of working U/G and Opencast mines.	MoC and MoM	Required SOP has been made by MOC and MOM.	Completed	
Fifth	8	M/o of Railways and Railway Board to be communicated for taking necessary air pollution control measures in respect of ECR (Mahadia) and WCR (Gajra Bahara, Gondawali and Bargawa) in Singrauli region of MP. Railway Board may be included as member of the Mission.	MoEF&CC	Chairman, Railway Board was requested to nominate an officer as a member of the Mission on 30.11.2023. MoEF&CC vide letter dated 17.01.2024 forwarded the recommendations of Mission w.r.t. air pollution control measures at ECR and WCR railway sidings.	Completed	
Fifth	9	Request of Hindalco TPP regarding allocation of abandoned stone quarry in Dala region may be forwarded to State Government and Committee for identification of mines under Ash Utilisation Notification, 2021.	MoEF&CC	Request of Hindalco TPP regarding allocation of abandoned stone quarry in Dala region was forwarded to PS, Dept. of Geology and Mining and Chairman, Committee for identification of mines on 21.12.2023. CPCB forwarded request to UPPCB for n.a.	Completed	

### Status of compliance of decisions taken in the meetings of "Fly Ash Management and Utilization Mission"

Meeting No.	Decision Point	Decision taken	Concerned Agencies	Status of Action Taken / Compliance	Summary of Compliance	Time limit for compliance
Fifth	10	CEPI score estimated by MPPCB and UPPCB in the Singrauli and Sonbhadra regions may be re-validated by CPCB.	CPCB	CPCB has carried out CEPI re-validation exercise in February 2024. CEPI score of Singrauli was 60.88 (2024) as compared to 61.38 in 2022. CEPI score of Sonbhadra was 67.86 (2024) as compared to 67.88 in 2022. Both Singrauli and Sonbhadra region are under Severely Polluted Areas category.	Completed	
Fifth	11	An advisory may be issued to all SPCB/PCCs to circulate the latest technologies for adoption by Stone crushers for improved air pollution control measures.	CPCB	CPCB has published 'Environmental Guidelines for Stone Crushing Units' in July, 2023 to prevent fugitive dust emission and uploaded on CPCB's website. The guidelines were circulated to all the SPCBs/ PCCs.	Completed	
Fifth	12	Road map for value added products such as use of bottom ash/ fly ash as a substitute for sand, bottom ash use in concrete making in coastal infrastructure projects to be prepared in consultation with NTPC, National Test House and other stakeholders.	CPCB	Jadavpur University (JU) has been awarded study project on 15.03.2024 on value-added utilization of bottom ash generated from coal fired thermal power plants by developing innovative technologies for its use in concrete production as partial replacement of sand. The scheduled time limit of the study is 7 months. Out of 10 TPPs' sample collection, JU has collected samples from 5 TPPs and started analysis of these samples. Bottom ash samples from 3 more TPPs to be collected during 27 June 2024 to 06 July 2024.	Completed	
Fifth	13	Best available technologies/practices for ash based products to be prepared and made available on MoEFCC and CPCB website.	CPCB	Same as above.	Completed	
Fifth	14	Environmental compensation imposed on TPPs, coal mine, stone crushers in Singrauli and Sonbhadra to be monitored and action to be taken against non-compliance. Status in this regard may be shared in the next meeting.	CPCB, UPPCB and MPPCB	<p>UPPCB: Environmental compensation of Rs. 13.473 cr. were imposed on 8 TPPs (Lanco Anpara, NTPC Rihandnagar, Shaktinagar, Anpara TPs, Obra TPS, Hindalco Ind. Aluminium re-processing unit, Hindalco-Al Division and Birla Carbon). Rs. 0.516 cr. have been deposited by 04 TPPs. Closure directions issued to 17 stone crushers out of 313 stone crushers. Environmental compensation of Rs. 9.954 crores imposed on 05 NCL projects (Bina, Duddhichua, Kakri, Khadia, Krishnshila). Amount is yet to be deposited. NCL Bina project deposited Rs. 2 crores for illegal dumping of coal at railway siding at Krishnshila as per Supreme Court and NGT directions.</p> <p>MPPCB: NEERI was engaged to conduct a study on environmental damage caused due to fly ash breach in Sasan Mega Power Ltd. in year 2020. Environmental compensation of Rs. 75 crore was estimated. The report was further forwarded to IIT BHU for re-evaluation and is under review. The final report is yet to be submitted to MPPCB. Further, the Joint Committee has imposed environmental compensation on various TPPs, coal mines and railway sidings for non-compliances. Hon'ble Supreme Court has referred the case to the Hon'ble NGT for re-consideration.</p>	Completed	



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Fifth	15	Recommendations of Joint Committee as mentioned in the directions of Hon'ble NGT(PB) O.A. 862/2022 vide Order dated 25.11.2022 to be shared with MPPCB and UPPCB for submitting the details of action taken report regarding its compliance and implementation. All respective industries, TPPs, mines/ stone crushers and railway sidings to ensure the compliance of the recommendation of Joint Committee and submit the compliance report to respective SPCBs.	CPCB, SPCBs and respective Industries/ stakeholders	<p>UPPCB: UPPCB vide letter dated 18.10.2023, 13.12.2023 &amp; 09.1.2024 has issued directions in compliance to recommendations of Joint Committee to control of pollution caused by ash transportation in accordance with Hon'ble NGT(PB) O.A. 862/2022 order dated 25.11.2022. These directions are mainly related to appropriate storage, handing and covered and moitured transportatation of ash, ash dyke maintainance, control of fugitive emissions, ash dyke stability, tyre washing, etc.</p> <p>MPPCB: MPPCB has issued directions in compliance to commendations of Joint Committee to control of pollution caused by ash transportatation in accordance with Hon'ble NGT(PB) O.A. 862/2022 order dated 25.11.2022. These directions are mainly related to proper handing and covered and moistured transportatation of ash and coal, control of fugitive emissions, monitoring of environmentally sound transportatation, etc.</p>	In-Process	Regular activity
Fifth	16	Abandoned mines which are not needed by TPPs and those completed backfilling activities may prepare plans for reclamation and restoration of biodiversity as part of mine closure plan and compliance of environmental clearance. Reclamation activities may be carried out under the supervision of State Forest Department.	Dept. of Mines and Forest Dept., Govt. of MP and UP	<p>MPPCB has issued appropriate directions in the matter to Dept. of Mines and Forest Dept., Govt. of MP vide letter dated 14.12.2023. A meeting was also conducted under the chairmanship of Chief Secretary, Dept. of Environment on 09.01.2024, wherein approrpriate directions were issued to concerned depts.</p> <p>UP: Status not received.</p>	In-Process	Regular activity
Fifth	17	Ambient air quality monitoring in and around thermal power plants, coal mines and stone crushers may be conducted and base line data set of the same seasons collected over the past two years may be analysed. Continuous evaluation of CEPI Score of Singrauli and Sonbhadara region and compilation of data may be carried out to assess the progress made in respect of control of air pollution.	State Govts. of U.P. and M.P., UPPCB and MPPCB, CPCB	<p>UPPCB: In Sonbhadra region, ambient air quality was analysed to assess the impact of implementation measures by various TPPs. PM10 level has improved to 146.3 µg/m3 in 2023-24 (till Dec.) from 167.3 µg/m3 in 2022-23. AQI improved to 135 in 2023-24 (till Dec.) as compared to 141 in 2022-23.</p> <p>MPPCB: In Singrauli region, ambient air quality is analysed through CAAQMS/NAMP stations to assess the impact of implementation measures by various TPPs and coal mines. Ambient air quality monitoring reports for FY 2021-22 and 2022-23 were sent vide letter dated 11.01.2024 to CPCB for re-validation of CEPI score.</p>	In-Process	Regular activity. Same as MoM 4/17
Fifth	18	Study on mixing of red mud with ash and its environmental aspects may be conducted and the results may be shared with CPCB.	State Govt. of M.P., MPPCB	Central Laboratory, Bhopal has completed the study on mixing of red mud with fly ash in Gorbi mine. Based on the study report, MPPCB has recommended not to proceed further with such exercise as it may cause leaching of heavy metals embedded in the red mud besides treating the acidic water of mine voids.	Completed	Same as MoM 2/17, 3/22, and 4/16
Fifth	19	Necessary directions shall be issued for covering the trucks with tarpaulin sheets for transportation of coal and ash by road and not to use thin LDPE sheets/ green net only to prevent spillage and fugitive emission of coal dust and fly ash during transportation.	UPPCB and MPPCB	UPPCB and MPPCB have issued directions to TPPs to ensure covering the trucks with thick tarpaulin sheets, and other suitable measures for transportation of coal and ash by road to prevent spillage and fugitive emission of coal dust and fly ash during transportation.	Completed	

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Fifth	20	Identification of available low lying areas for disposal of ash by TPPs and monitoring of specific conditions stipulated in the consent granted for dumping of ash in it. Utilization of ash for filling allotted sites of low lying areas must be monitored through geo-tagging and/or Video monitoring. Ash disposed in low lying areas to be stabilized with soil cover and grass/ green belt.	All TPPs, UPPCB and MPPCB	UPPCB: Consent-to-Operate granted to 11 units for disposal of ash in low-lying areas. 38,56,784.05 MT ash have been disposed so far in low lying areas.  MPPCB: Consent/permission has been obtained by TPPs in the State for disposal of ash in low-lying areas/abandoned mines in 67 areas of about 754.24 hectares area in which 221.76 LMT ash can be disposed of. 22 areas have been reclaimed with ash disposal on which plantation / parks/ other projects have been developed. Besides, consent to establish has been granted for disposal of ash in 22 low lying areas/mines.	In-Process	Regular activity
Fifth	21	Commencement of backfilling of ash in mine void of allotted Gorbi pit no. 3 by Anpara TPS by December, 2023. Progress in this regard may be shared with the concerned SPCB and CPCB.	Anpara TPP, UPRVUNL, UPPCB	Anpara TPS, UPRVUNL has sought permission from District Administration in Singrauli, M.P. regarding transportation of fly ash by road to the allotted Pit-3 of Gorbi mine for backfilling activities.	Select	
Fifth	22	All the pending/ ongoing activities in respect of implementation of decisions made during 1st, 2nd, 3rd and 4th meeting of the Mission shall be undertaken and action taken report shall be furnished. Progress to be updated on the website on monthly basis. Necessary formats may be put up on the website to enable all stakeholders to upload the progress online. Login and passwords for all stakeholders to be generated immediately.	Concerned Ministry/ CPCB/ State Govts./ SPCBs/ Organisation)	> Updated status of action taken on decisions of 1st, 2nd, and 3rd meetings have been sought from the stakeholders in a uniform format, and the same has been compiled (attached).	In-Process	Regular activity